Financial Information

TELEKURS iD

Telekurs FinXL 1.5

User Guide

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1. Introduction

Telekurs FinXL is the new version of Telekurs iD dynamic links solution.

Fully integrated within Excel, it allows you to insert and edit real time data functions (GetQuote), historical data snapshots (GetHisto and GetSnap), interpolated rate calculations (CalcRate) and bond calculations (CalcBond and SimulBond). They run exactly like native Excel functions.

The pluses of Telekurs FinXL are:

- Excel integration using "add-in" technology, which makes FinXL functions true Excel functions.
- Automated market watch imitating Telekurs iD lists.
- Possibility of historical data extraction.
- Specific yield-oriented calculation functions.

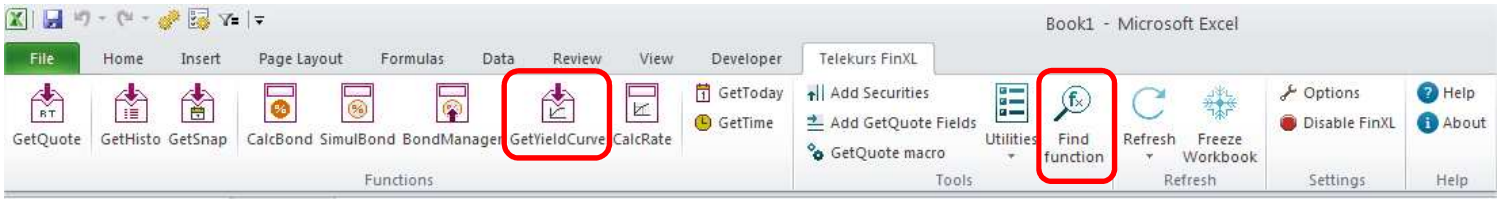
This document is a functional presentation of Telekurs FinXL. For technical information, see the Installation User Guide.

2. Basics

2.1. Access to Telekurs FinXL

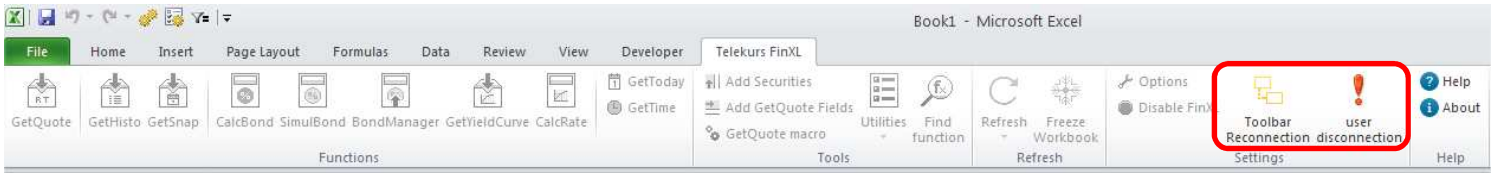
Telekurs FinXL is available in your Excel application via a dedicated toolbar, via the contextual menu, and via Excel Functions wizard.

- Telekurs FinXL ribbon in Excel menu bar:



FinXL version 1.5 includes a new button for GetYieldCurve function and another one for the new tool, Find FinXL function.

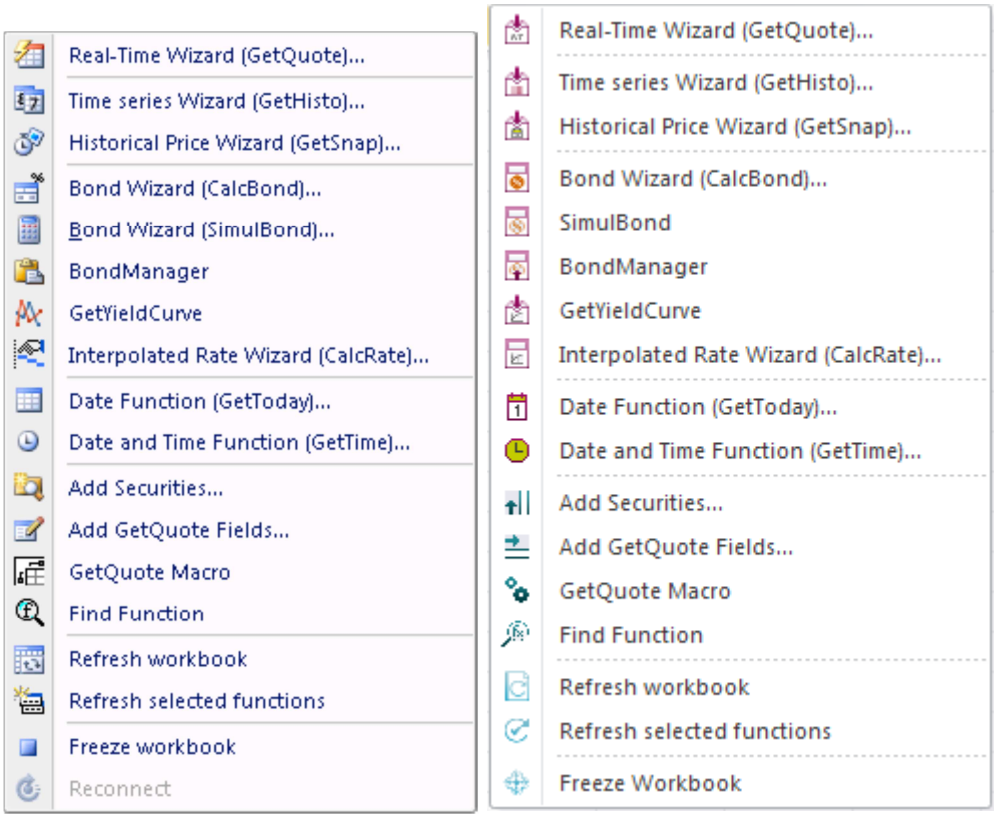
Please note that ribbon look is different when toolbar has been disconnected:



N.B.: With version 2003 of Excel, no FinXL ribbon is accessible but a floating tool bar is available:

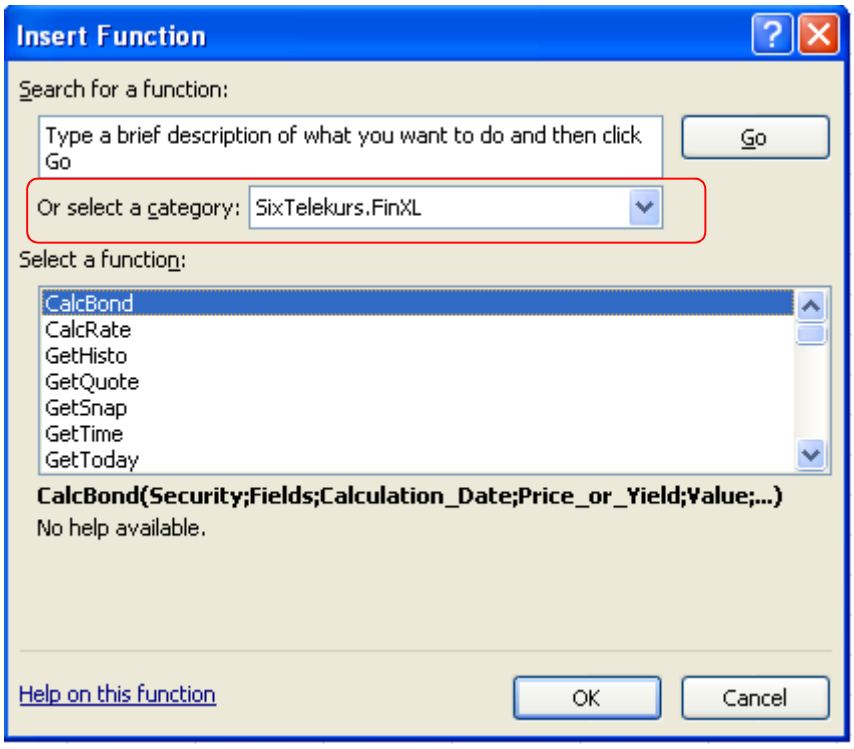
- Telekurs FinXL menu

Right click on a cell to display Excel contextual menu, then select “Telekurs FinXL” at the bottom of it to access the FinXL menu.



- Telekurs FinXL functions within "Insert Function" Excel wizard

You can also access all functions within Excel's "insert function" feature: in the “formula” tab of Excel menu bar, click on “insert function” and set a filter on Six Telekurs.FinXL.



2.2. Overview of FinXL functions

FinXL functions can be divided in two groups: main functions (chapter 3), widely used to insert Six content in workbooks; additional tools (chapter 4), to manage these workbooks in an efficient way.
Here is a quick list of FinXL main functions.

Function's name	Function's type	Description
GetQuote	Financial information	FinXL's core function displaying real time data and characteristics
GetHisto	Financial information	Displays historical time series
GetSnap	Financial information	Displays last known quotes at a given date
GetYieldCurve	Financial information	Displays a yield curve
CalcRate	Financial calculation	Calculates interpolated rates from a selection of benchmarks
CalcBond	Financial calculation	Offers actuarial calculations on public bonds
SimulBond	Financial calculation	Offers actuarial calculations on private bonds

- All FinXL Functions can be either generated by their associated wizard or directly typed as if writing a standard Excel formula.
  If directly typed in the current cell, the formula must respect the specific syntax of the function called.

- As for any Excel function, the definition of parameters can be done outside the cell containing the formula itself, using cell references or Excel labeled ranges.
  Warnings:
  - Cell ranges or Excel labeled ranges should not be placed between double quotes when used in a FinXL function formula.
  - The use of a cell reference which contains a volatile Excel function (such as "Today() or Now() functions) should be avoided. We strongly recommend using FinXL functions GetToday and GetTime instead. (See 4.1. GetToday and GetTime).
  - As in any Excel function, the length of the parameters string cannot exceed 250 characters.

- Anytime you need to change parameters of a FinXL function, you can recall its associated wizard: select the cell containing the formula and click the specific wizard button.

2.3. The auto-update and refresh options parameters

Using FinXL functions, you may sometimes be willing to reduce the throughput of information or the amount of calculations generated into Excel, either because the flow of information disturbs Excel's operating logics (especially when using dynamic Excel functions implying heavy calculations), or for some specific needs, such as keeping market data unchanged while analyzing it.

The current chapter presents the different parameters and tools allowing you to manage the output of information provided by FinXL.
Please refer to the "Best Practices" document for information on workbook optimization.

Two different parameter types are available within FinXL functions in order to limit the flow of calculation:

- GetQuote "refreshing frequency" parameter

- "Auto-update" parameter for all historical or calculation functions working in snapshot mode (GetHisto, GetSnap, GetYieldCurve, CalcBond and SimulBond)

- GetQuote is a real time push function. The flow of information it provides can have, in some cases, a high impact on Excel calculation speed (for instance when querying many bid/asks of very liquid listings in a workbook already containing heavy Excel calculations such as VLookup).

  GetQuote "refreshing frequency" parameter allows you to choose the speed at which you want real time data to be refreshed.
  Possible values are "Real time", "Snapshot", every 1, 2, 5, 30 seconds or every minute.

  - When choosing one of the real time values, data is updated at the corresponding frequency.

  - When choosing "snapshot" frequency, the data is queried only once and is not refreshed afterward.

  If you want to block the display of market updates for all the GetQuote functions of your workbook, you can use the "Freeze workbook" tool at the right hand side of the FinXL ribbon.
  This action is equivalent to turning temporarily all GetQuote "refreshing frequency" parameters to "snapshot".
  N.B.: Freezing the workbook blocks real time's updates: it is applied to GetQuote, GetToday and GetTime functions but has no effect on historical and calculation functions.

  Whenever you want to update a given GetQuote function, you can use the "refresh selected functions" tool or the "refresh workbook" tool to update all the formulas. In both cases, GetQuote functions are then refreshed once but still freezed.

(See refresh tools section: 4.2)

- The other functions - GetHisto, GetSnap, CalcRate, GetYieldCurve, CalcBond, and SimulBond - be them informative or calculative, display the particular result associated to a specific combination of parameters. The result displayed is permanent as long as the inputs do not change.

  When editing such FinXL formulas, any effective change provokes an immediate update of the results.

  When the formulas refer to other cells or to Excel names, the update process depends on FinXL and Excel settings.

  For data persistence reasons, an "auto-update" parameter is available within these four functions in order to let you choose whether changes of the content of a cell used as input should provoke an update of displayed result or not.

Here is an example of GetHisto formula where the requested instrument is dynamically defined by the content of cell E3: =GetHisto(**E3**;"OPEN;LAST";"1M";"**Y**")
The "auto-update" parameter allows you to decide how a change of the content of cell E3 should be processed:

- When this parameter is set to "Y", any change of value in E3 is immediately taken into account by FinXL, and new values are displayed by the GetHisto function.

- Setting this parameter to "N" blocks recalculation of the GetHisto function when the content of E3 changes.
  Whenever you want changes to be applied, you can force recalculation using the "Refresh selected functions" tool at the right hand side of the FinXL ribbon. If you want to force the update of all FinXL functions of your workbook, use the "refresh workbook" tool instead.

N.B.: GetHisto queried with relative dates will be updated automatically on change of date if you have set auto-update parameter to "Y".

Find all parameters' default value in each function detailed description (3.1.1, 3.2.1, 3.3.1, 3.5.1, 3.6.2)

- The following tables summarize the results which can be obtained with different combinations of Excel and FinXL parameters and options:

Auto-update parameter:

XL in Automated calculation mode	auto-update value	
action	**Y**	**N**
Changing a parameter manually within the formula or through the wizard	updates	updates
One of the input is a cell containing a formula, the result of which just changed	updates	no update, even if you close/reopen the workbook
Refresh selected on the function or refresh all	not needed: changes are already applied	updates

XL calculates "on order"	auto-update value	
action	**Y**	**N**
Changing a parameter manually within the formula or through the wizard	updates	updates
One of the input is a cell containing a formula, the result of which just changed	no update	no update
Refresh selected on the function or refresh all	updates	updates

GetQuote refresh frequency parameter:

XL in Automated calculation mode		action		
GetQuote's refresh frequency parameter	**workbook state**	**no action by user**	**refresh selected/ refresh all**	**close/reopen the workbook**
one of the real time values	**unfreezed**	real time updates at the frequency defined in the function	forces an immediate refresh when pressed, even if contradicting defined frequency of refresh	forces an immediate refresh: chosen real time frequency is then reestablished
	freezed	no refresh: freezing workbook is equivalent to setting refresh frequency parameter to SnapShot for all GetQuote functions	forces a new SnapShot: (selected/ all) GetQuote functions are refreshed once but still freezed.	Unfreezes the workbook, hence updates again all Getquote formulas in real time, at the frequency defined within each function
snapshot	**unfreezed**	no refresh	forces a new SnapShot: GetQuote function is refreshed once	forces a new SnapShot: GetQuote function is refreshed once
	freezed	no refresh	forces a new SnapShot: GetQuote function is refreshed once	forces a new SnapShot: GetQuote function is refreshed once

XL calculates "on order"		action		
GetQuote's refresh frequency parameter	**workbook state**	**no action by user**	**refresh selected/ refresh all**	**close/reopen the workbook**
one of the real time values	**unfreezed**	no refresh	forces a new SnapShot: (selected/ all) GetQuote functions are refreshed once but still freezed.	you need to force the calculation when reopening the workbook
	freezed	no refresh	forces a new SnapShot: (selected/ all) GetQuote functions are refreshed once but still freezed.	you need to force the calculation when reopening the workbook
snapshot	**unfreezed**	no refresh	forces a new SnapShot: GetQuote function is refreshed once	forces a new SnapShot: GetQuote function is refreshed once
	freezed	no refresh	forces a new SnapShot: GetQuote function is refreshed once	forces a new SnapShot: GetQuote function is refreshed once

2.4. Securities and fields

2.4.1. Defining securities in a FinXL function

All FinXL financial functions except GetYieldCurve use a list of securities. This section explains how to define correctly a security, depending on your working mode, except use of wizards. Wizard usage is defined in detail in chapter 3.

- **Direct insertion**

When directly typing the formula in the current cell, securities identifiers may get typed in two modes:

- The complete syntax: **code,agency,market**.
  All codes are allowed, markets can be expressed in BK (numerical market codes) or in alphabetical code (i.e. ENX…).

  The Table of coding agencies below lists the different correct agency's reference you may use to define an instrument:

Code	Description
XX	ISIN
SY	TRSYMB
ERG	ERGSYMB
CH	VALOR
FR	NSIN-FR
GB	NSIN-GB
NL	NSIN-NL
CA	NSIN-CA
LU	NSIN-LU
XS	NSIN-XS
AT	NSIN-AT
BE	NSIN-BE
JP	NSIN-JP
IT	NSIN-IT
SE	NSIN-SE
DK	NSIN-DK
NO	NSIN-NO
DE	NSIN-DE
US	NSIN-US

  Please refer to the User Manual Telekurs-iD (Market search section) to get information on the process to access the list of market references.

- The quick syntax: **code,market**.
  In this case, GetQuote could return "unknown security" when the code is false or "incomplete identification" when the code exists in more than one agency.

Use the wildcard "0" as market code value in order to request a security on its most liquid market place. (See 2.4.2. Most Liquid parameter)

N.B.: You may also use the syntax "**code**" which will be interpreted as query to get the information from your favorite market set in FinXL options/user preferences.

- **Insertion from Telekurs iD**

  You may also insert securities from Telekurs iD: thanks to TKiD "Data Exchange with Excel" command or using a Drag & Drop, add one or several lines from a list. In these cases, a specific syntax will be automatically applied: "**Valor code,CH,market code,currency code**".

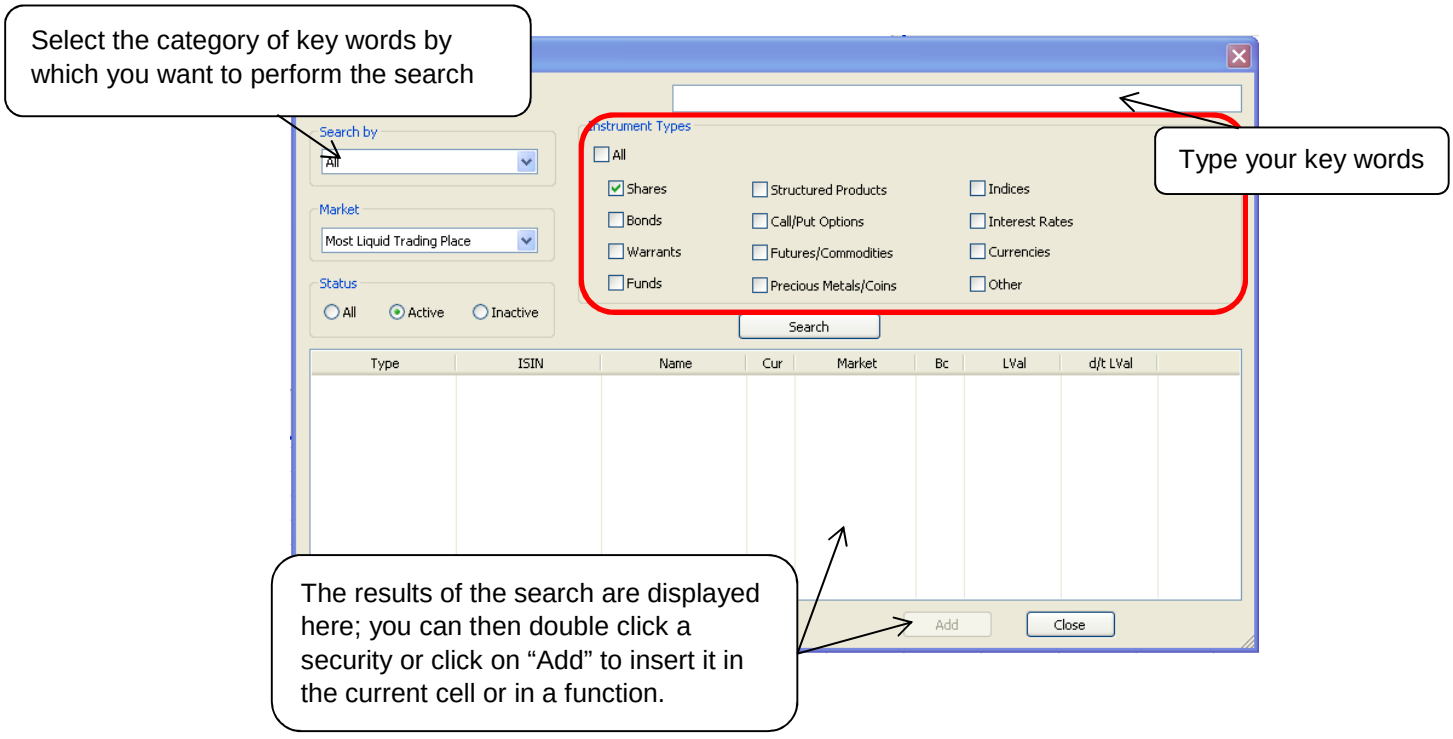
- **Securities search (add securities)**

This tool, using Telekurs iD securities search, promptly inserts identifiers into a column.

You can then add a Telekurs FinXL function using the range of pasted identifiers as cell reference rather than directly typing the corresponding code in the formula.

Clicking this button allows you to get the assistance of the securities search wizard that you can also access through all FinXL function wizards by using this button: , at the right hand corner of the wizard.

The securities search wizard allows you to find securities code that you don't know in order to insert them into a FinXL function.

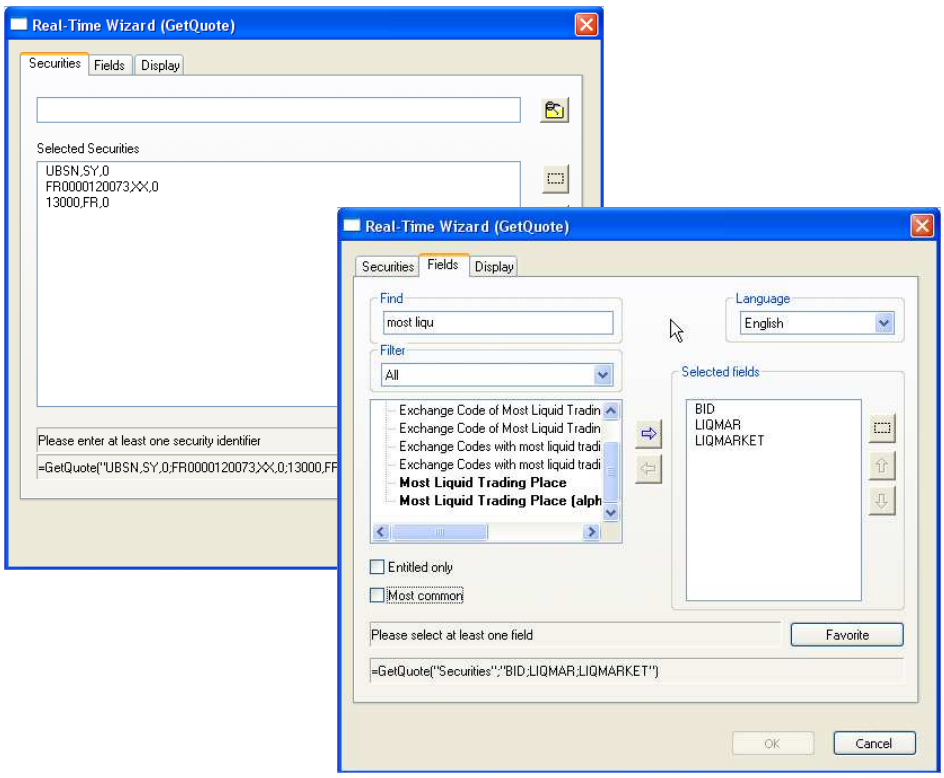


The instrument type filters section allows you to perform a targeted search in order to shorten the list of displayed results and make the selection of instruments easier.

2.4.2. Most liquid market

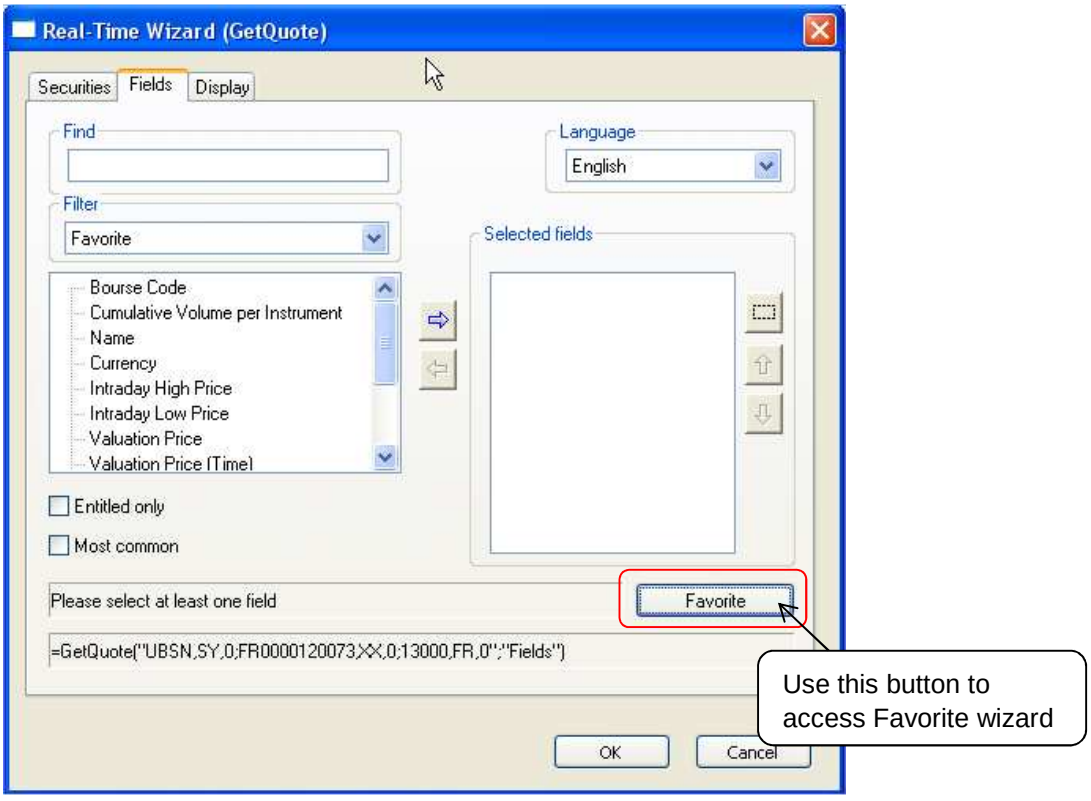
Rather than defining a security with a given market BC number, it is possible to query information on its most liquid market place, just by typing "0" as BC number in the security definition : "**code,agency,0**" or "**code,0**"

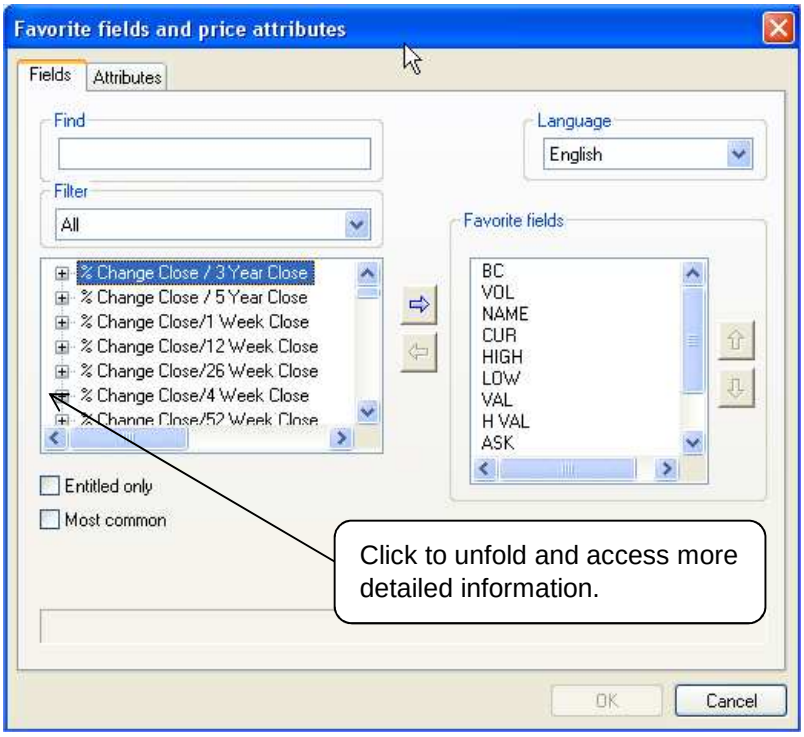
N.B.: in that case, we strongly recommend selecting “LIQMAR” (num) or “LIQMARKET” (alpha num.) in your fields’ selection in order to check which market place has effectively been used to retrieve the results.



2.4.3. "Favorite" data fields and price attributes

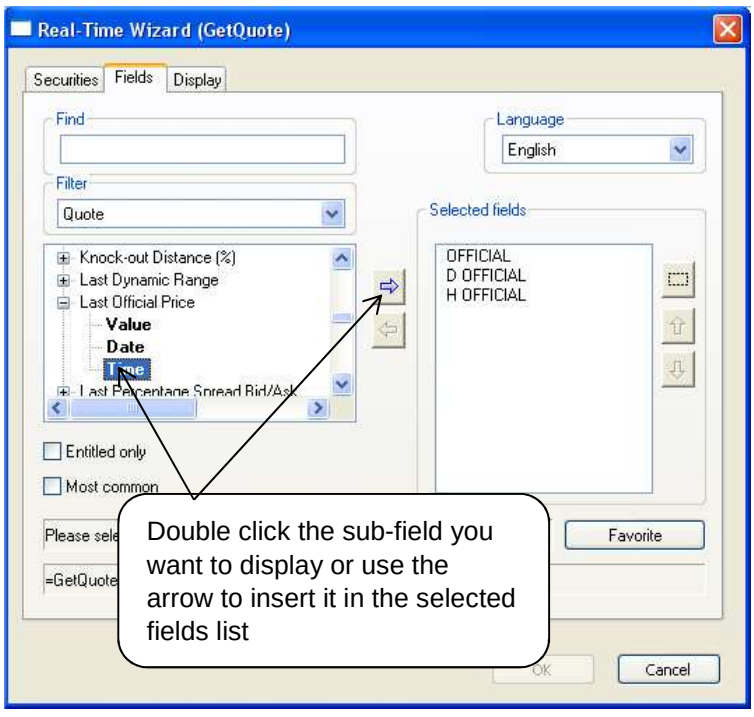
GetQuote gives access to more than 2,000 fields. In order to find more rapidly the fields you frequently need to display, you can define a list of favorite fields.



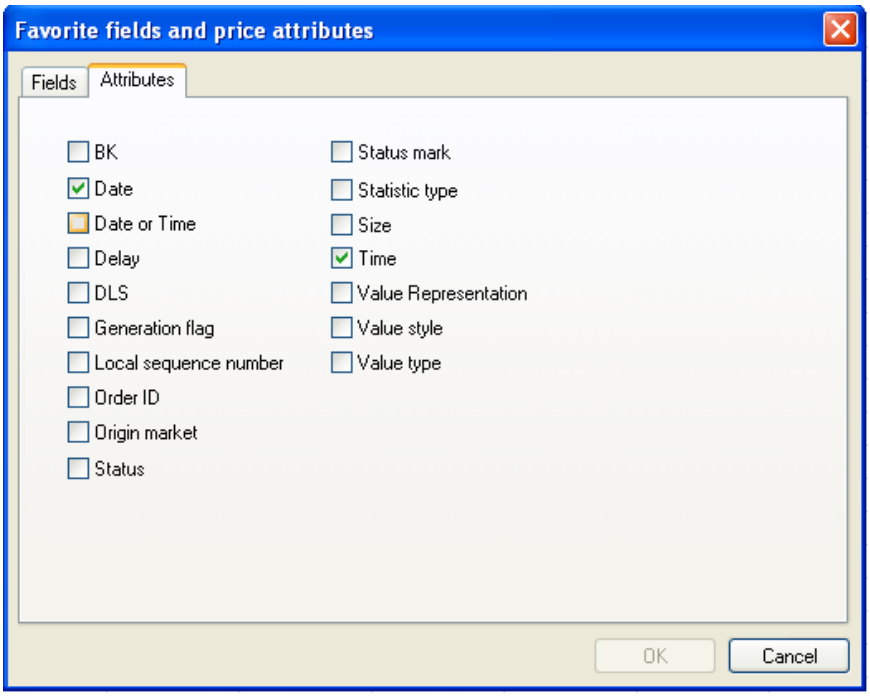


GetHisto and GetSnap share the same list of favourite fields.

In the field lists within FinXL wizards, Market Data (not Reference) comes with many flavours for a given field: date of information, time, delay, type of quote... You can access those flavours by clicking the "+" symbol left of the field name.



When clicking on the Attributes tab of the Favorite wizard, you access a control panel that permits to define which attributes you want to see when you unfold the definition of a field in the main wizards.



2.4.4. The “Display list of fields” tool:

The “Display list of fields” tool allows you to display automatically the list of FinXL fields in a 8 columns table, where you can find:

- Field mnemonic
- Field description

} Always in English

- FinXL associated function
- Flag "field belongs to your favourite fields list"
- Flag whether you are entitled to this field
- Flag "field belongs to the most common fields list" (new in 1.5)
- Short label
- Long label

} using FinXL interface language as set in “User Preferences” (English, French, German, Italian, Spanish). New in 1.4, 1.3 used only English.

2.4.5. Separators

It is now possible to include empty cells or values when writing a FinXL query.

Until now, a query such as GetQuote("ABBN,SY,SWL**;;**UBSN,SY,SWL";"NAME;VAL") would have led to a "security missing" error, due to the two consecutive semicolons. In the same manner, the relative syntax GetHisto(A2;B2:E2;"1Y") did not work if one of cells in the B2:E2 array was empty, a syntax error would have occurred.

The missing instruments and empty cells in list of listings or list of fields are called **separators**.

FinXL functions and separators

Separators can be used in the following functions

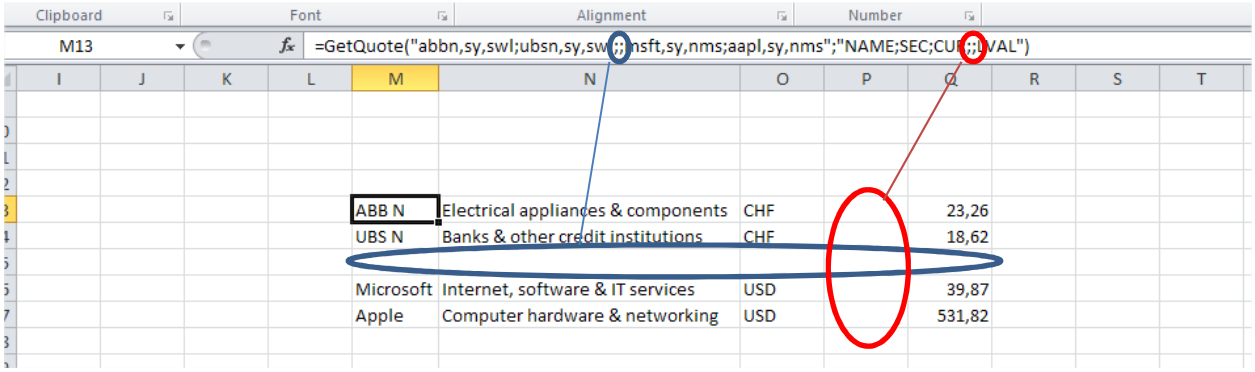
	Listings	Fields
GetQuote	Allowed	Allowed
GetHisto	Allowed	Allowed
GetSnap	Allowed	Forbidden
CalcBond	Forbidden	Allowed
SimulBond	Forbidden	Allowed

- Separators can be introduced at any position within the list of listing codes (or field names).
- You can use several separators in the same formula.
- Consecutive separators are allowed.
- A list must contain at least a non-separator item (listing or field).

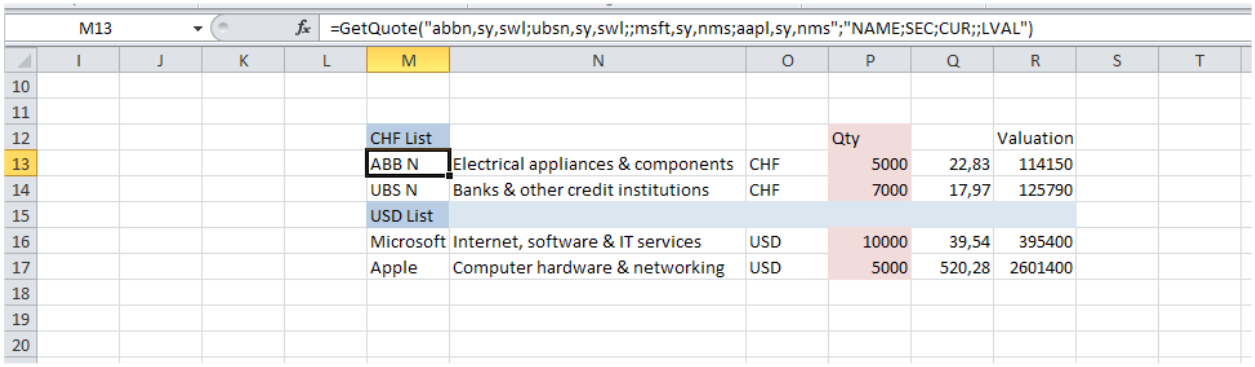
Result display when separators are used

When separators are introduced in a FinXL formula, FinXL writes nothing in the associated row or column.

For instance, formula =GetQuote("abbn,sy,swl;ubsn,sy,swl;;msft,sy,nms;aapl,sy,nms";"NAME;SEC;CUR;;LVAL") will be displayed as below.



The empty columns/rows can be used for inserting personal data and formulas.
FinXL never writes in these cells.

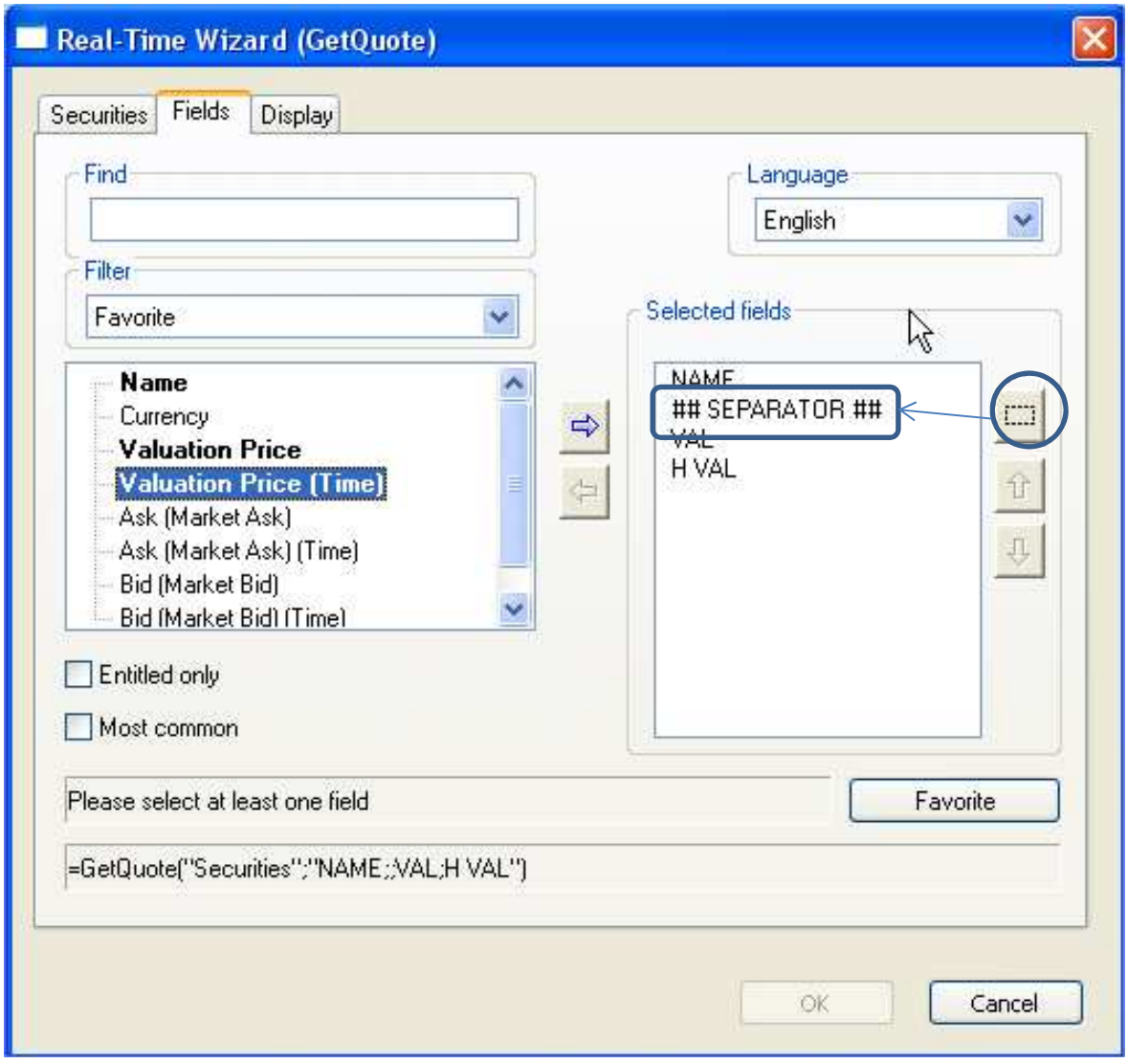


Inserting separators in Wizards

In Securities and Fields tabs, a new button allows the insertion of a separator in the list.

In the selected fields, a pseudo-field ## **SEPARATOR** ## is displayed.
As any ordinary field, it can be moved (by using the arrow buttons) or removed from the list.

In the formula, a separator is translated in two consecutive semicolons **;;**



2.5. Dates and periods

Some FinXL functions use a date or a period as parameter: GetHisto, GetSnap and GetYieldCurve.
Dates and periods can be fixed or relative.

Fixed dates format must be in accordance with in your regional settings option (JJ/MM/AAAA, JJ.MM.AAAA, …)

For instance:

GetSnap("MSFT,SY,NMS";"VAL";"01.07.2013") last known valuation price for Microsoft on 1st July 2013.

GetHisto("UBSN,SY,SWL";"VAL";"01/01/2010;31/122010";"Y") valuation price for UBSN from 01/01/2010 to 31/12/2010.

Relative dates or rolling periods are expressed as a number of a unit before today.
Today can be written **"D"** or **"0D"** (GetYieldCurve only).
You should set the refresh parameter to "Y" if you want to refresh your workbook automatically when you open it.

Symbol	Unit
D	day
W	week
M	month
Y	year

Available units

For instance:

GetYieldCurve("CORPORATE,AAA,CHF,Synthetic";"D";"Y") yield curve for the current day.

GetHisto("ABBN,SY,SWL";"VAL";"5Y";"Y") valuation price of ABBN for the last five years.

2.6. Result display of FinXL functions

By default, the result of FinXL functions is displayed starting from the cell containing the formula.

As from this version, the result display can start from any other cell within the same workbook.
In all the functions, an optional parameter has been added, **the target cell**:

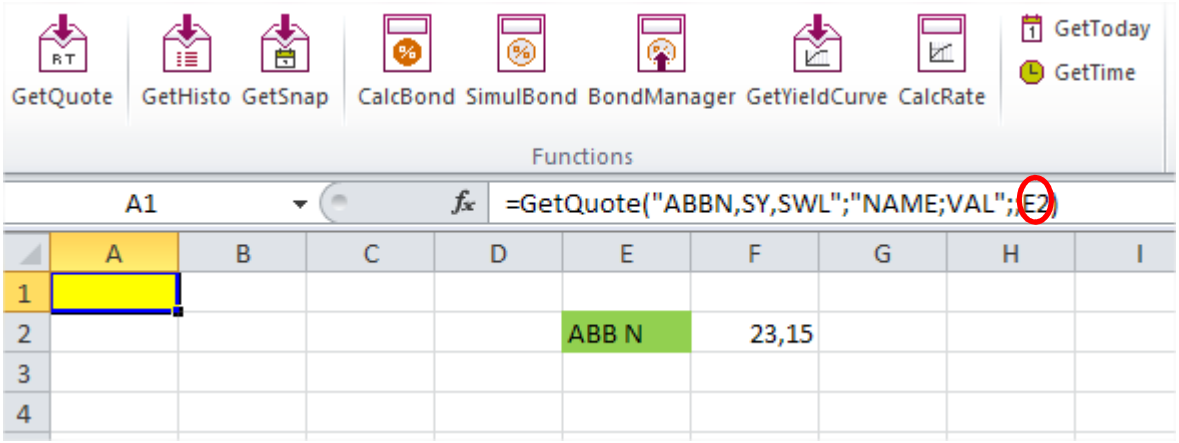
- When this argument is not entered, the function behaves as before.
- If the argument is set, indicating a cell within the same workbook, the result of the function will be displayed starting from this cell.

This argument can be either a **single cell** or a **name** referring to a single cell.

Please note that target cell in other workbooks are not allowed.
Target cells can be set in any sheet within the workbook containing the formula.

This feature must be used very carefully: you should always check that the **target area** (the result display cell range of the FinXL function) does not contain data.

Example of display result using a target cell.

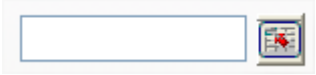


In the screenshot above, the formula was entered in the cell A1 (yellow cell).
The forth argument circled in red indicates that the result must be displayed starting from the cell E2 (green cell).

When a target cell is indicated, FinXL behaves exactly as if the formula was entered in the target cell.

Wizards and target cells

The display tab of FinXL functions wizards includes a new control



You can enter directly the target cell reference in the edit control: A4, Sheet2!AB100, my_name

You can also select the chosen cell within your workbook, by clicking it and then click the arrow button : the edit control will be automatically filled with the reference of the cell.

3. FinXL main functions

3.1. GetQuote

3.1.1. GetQuote Function

GetQuote is Telekurs FinXL's core function, replacing Telekurs iD DDE links.
GetQuote syntax is the following:

=GetQuote("SECURITIES";"FIELDS";"DISPLAY";TARGETCELL)

SECURITIES: Security's identifiers (see 2.4.1. Securities insertion)

- It is possible to request several securities in the same GetQuote function. Security's identifiers will be separated by ";".

FIELDS: Fields codes separated by ";".

DISPLAY: Optional parameters separated by ";".

Three parameters are available:
- NAME = display field names on first row
- INV = display fields in rows instead of columns;
- a refresh parameter (RT (real time), 5S (5 seconds)…).

TARGETCELL: Display result starting from that cell (*optional*)

- **GetQuote functions, examples**

  - Using explicit parameters:

=GetQuote("350000,FR,ENX";"LAST";"1MN"): display the last price for CAC 40 index with a refresh every minute.

  - Using external cell references :

– Cell ranges

=GetQuote(A2:A10;B1:F1;"NAME"): create a table using cells A2:A10 as a list of securities, cells B1:F1 as fields, and displaying the field names in headers

– Excel labeled ranges

=GetQuote(mysecurities;myfields): create a table using labelled ranges "mysecurities" and "myfields"

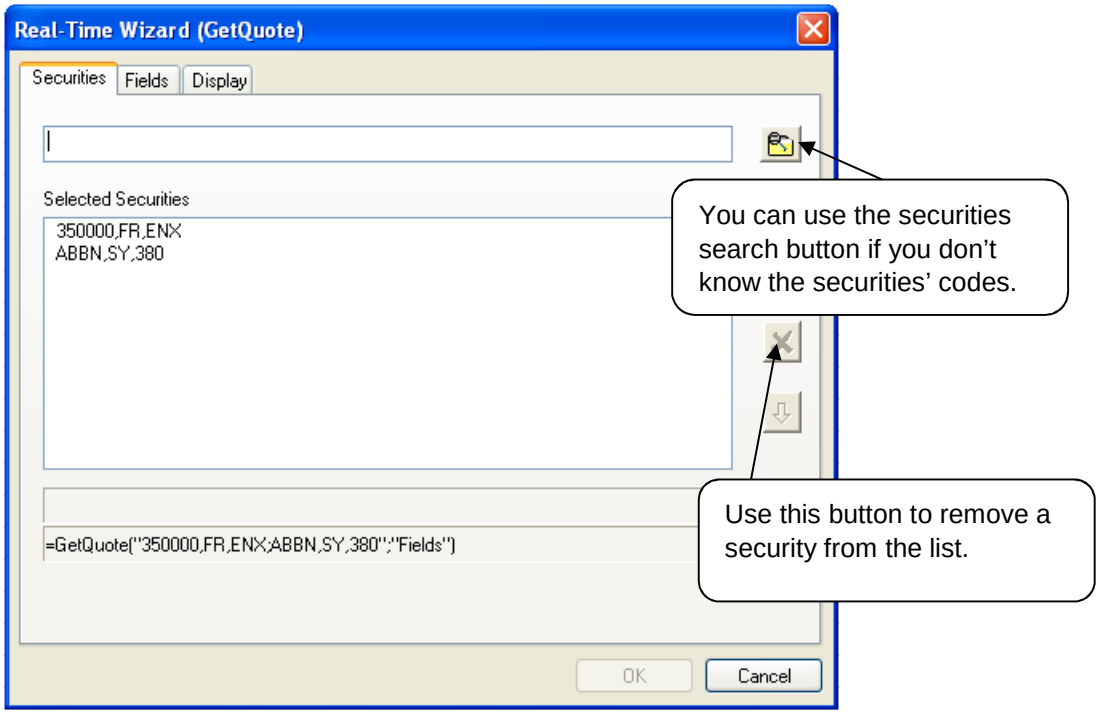
3.1.2. GetQuote Wizard

The GetQuote Wizard offers assistance to new users in creating a GetQuote function for a limited number of securities and fields. It is composed of three tabs.

- **The Securities Tab**

The Securities tab is used to select securities to use within the function.

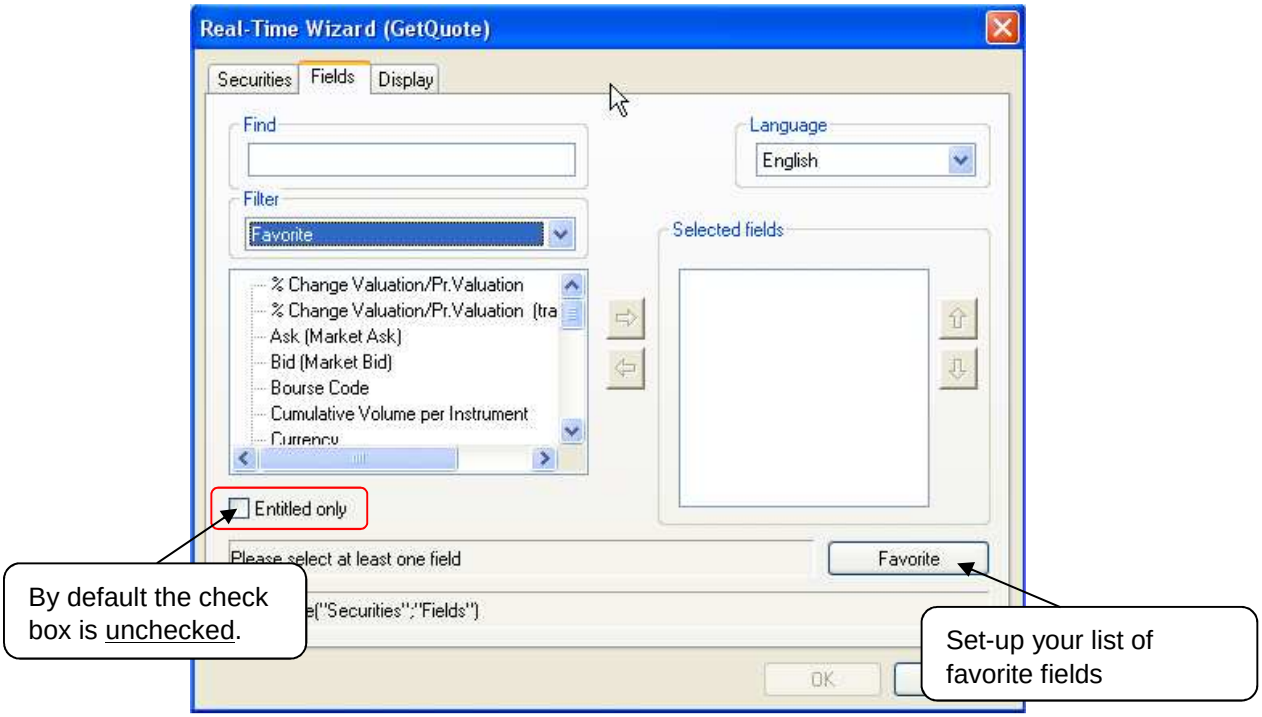
This information is MANDATORY: at least one security has to be selected before the function can be inserted.



- **The Fields Tab**

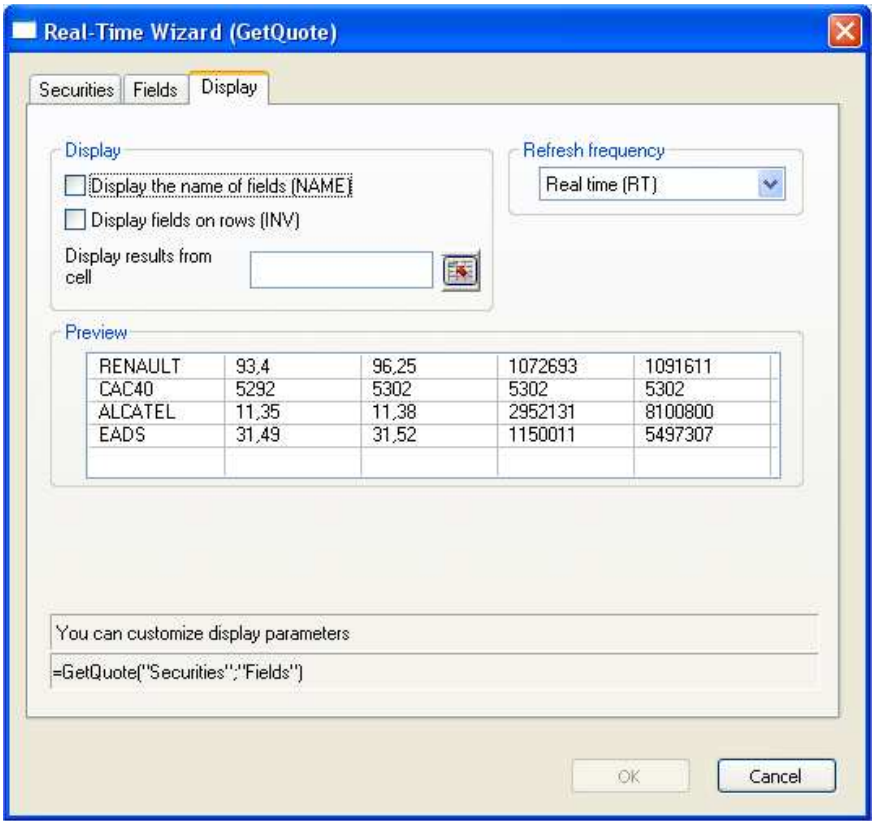
The second tab, "Fields", is used to specify the fields the function will display.

- This information is MANDATORY: at least one field has to be selected before the function can be inserted.
- N.B.: a "favorite" filter allows you to set up a restricted list of favorite fields and attributes. You will find more easily your most frequently used fields if you add them in this list.
- From version 1.4 onwards, it becomes possible to display only fields to which you are entitled.



- **The Display Tab**

The third tab defines optional parameters controlling the display of field names, the inversion of rows and columns and the reset parameters and the target cell for displaying result.



3.1.3. GetQuote Tools:

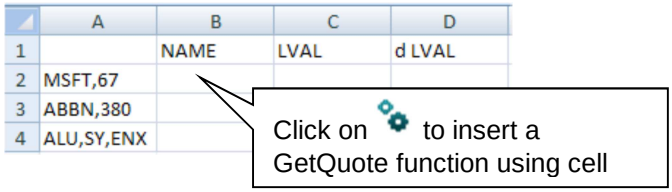
- **Fields search (add GetQuote Fields)**

This feature promptly pastes selected fields into a row.

You can then add a GetQuote function using the range of pasted fields as cell reference.

- **GetQuote macro**

This tool promptly inserts a GetQuote function in a cell using the column immediately to its left as a list of securities and the row immediately above as fields.



3.2. GetHisto

3.2.1. GetHisto function

GetHisto function displays historical time series.
GetHisto syntax is the following:

=GetHisto("SECURITIES";"FIELDS";"PERIOD;"AUTOREFRESH";"DISPLAY";"FILTER";"CARRYOVER";TARGETCELL)

SECURITIES: Security's identifiers. (See 2.4.1. Securities insertion)

FIELDS: Fields codes separated by ";".

PERIOD: Rolling period or a date range (separated by ";").
Recognizes any of the following syntaxes:
- Rolling period = "7D", "2W", "3M" or "1Y"
- Period with a fixed start and a running end= "21.07.2006"
- Fixed period = "21/07/2010;22/07/2012"

Dates format must be in accordance with in your regional settings option.

AUTOREFRESH: Automatic refresh of the data can be set:
"N" disables the automatic refresh.
No parameter or "Y" makes refresh automatic for any change of any input parameter. See chapter 2.3

DISPLAY: Optional parameters separated by ";".

- 2 data sorting parameters are available:
  - VAR = group data by fields rather than by securities
  - ASC = sort data by ascending dates

- 1 parameter allows you to choose how to take into account corporate actions:
  - No parameter or empty string= data adjustment to today (default value)
  - ENDADJ = data adjustment to the end of the requested period
  - RAW = no data adjustment, the raw data is displayed. Please note that if an event affecting data occurred during the period, you may obtain discontinuous series of data, disturbing any calculation on it.

    Example: there were two splits on equity ABC this year with a 0.5 adjustment coefficient on March 14, and a 0.8 adjustment coefficient on May 15

    A GetHisto request made on June 4, querying for the last price, from March 1 to March 31, Fridays only, will give the following results, depending on the adjustment mode:

    Example: data adjustment options:

ABC security	RAW	ENDADJ	DEFAULT
29/03/2013	50	50	40
22/03/2013	50	50	40
15/03/2013	50	50	40
08/03/2013	100	50	40
01/03/2013	100	50	40

- INV= time series will be displayed in rows instead of columns (inversion of rows and columns)

- 2 parameters allow you to choose the result matrix presentation:
  - HIDE_HEADINGS = hide headings (listing names and field names)
  - HIDE_DATES=hide dates.

  Those last 2 parameters replace the PRICE parameter of the previous versions. To ensure compatibility with workbooks created with older versions of FinXL , PRICE is still recognized as a FinXL keyword and is interpreted as both HIDE_HEADINGS and HIDE_DATES set.

FILTER: Filter by date type.

Following values are available:

- No parameter or empty string = no filter applied (default value)
- MON = every Monday
- TUE= every Tuesday
- WED= every Wednesday
- THU= every Thursday
- FRI = every Friday
- SAT= every Saturday
- SUN = every Sunday
- FIRSTM = every first day of each month
- LASTM = every last day of each month
- LASTY = every last day of each year

CARRYOVER:

This setting defines how blanks in time series should be processed:

- No parameter or “N” disables carrying over the previous value (default value)
- “Y” activates the carry over feature.

When this option is set, if no value exists for a given date and a given field, FinXL will deliver the latest value available at this specific date and for this specific field (works like GetSnap function would).

Please note that this parameter changes the data set: all the dates within the requested period will be displayed.

N.B. 1: You can combine FILTER and CARRYOVER parameters.

N.B. 2: GetHisto formulas created with older versions of FinXL are accepted, with the same result as in the former version.

TARGETCELL: Optional origin for displaying result (see 2.5 Result display of FinXL functions)

- **GetHisto functions, examples**
  - Using explicit parameters:

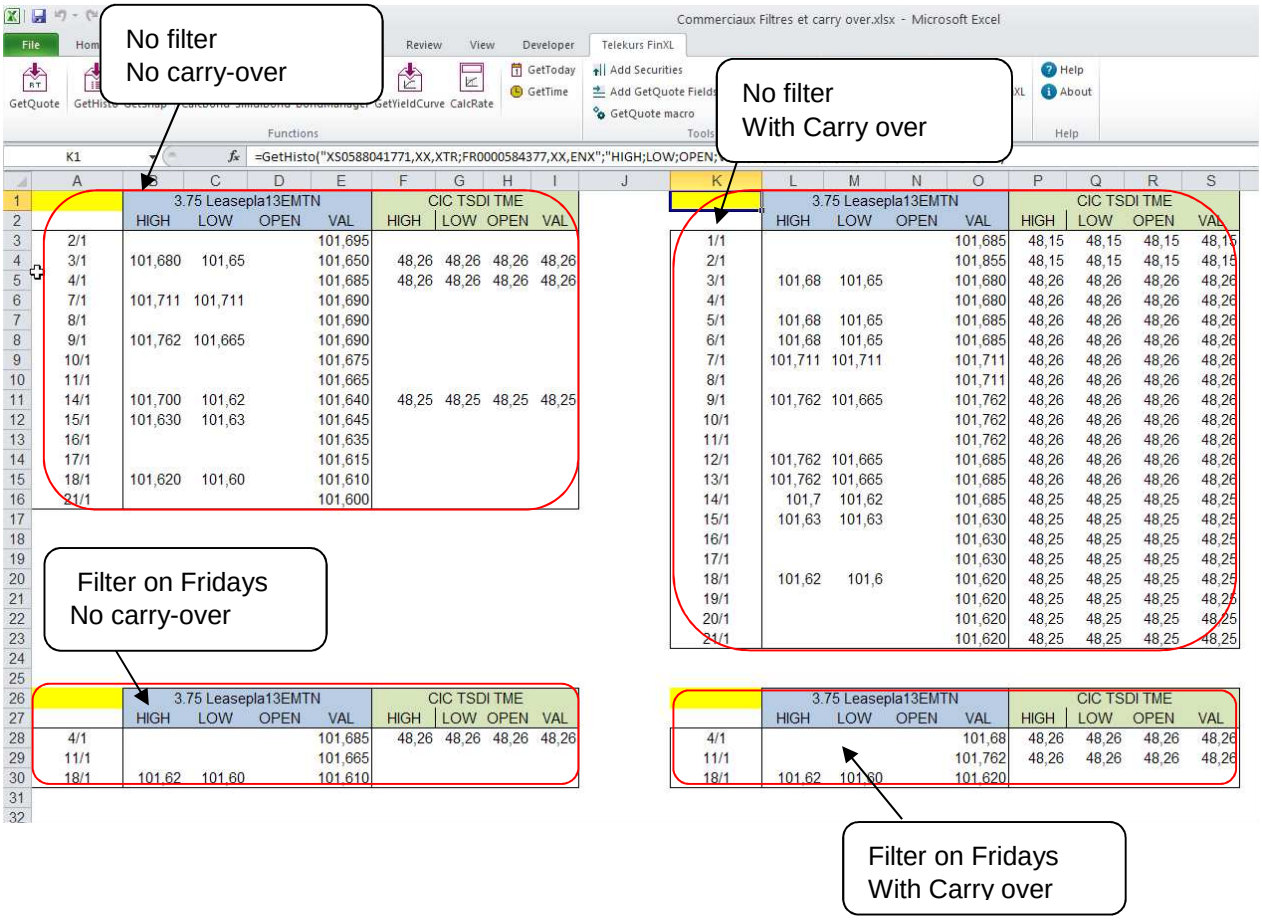
=GetHisto ("ABBN,SY,380";"VAL";"20D"): create a table displaying the valuation price for ABBN for the last 20 days

=GetHisto("ABBN,SY,380";"VAL";"31/12/2005";;;”FIRSTM”;Y”;Sheet2!B1): create a table displaying the valuation price for ABBN on the first day of each month’s since 31/12/2005, carrying over the previous values if needed. The result is displayed starting from cell B1 in the worksheet sheet2.

  - Using cell references:

=GetHisto (A2;B1:F1;"01/01/2010;31/12/2010";"Y";"ASC"): create a table using cell A2 as a security, cells B1:F1 as fields from 01/01/2010 to 31/12/2010, and sorting data by ascending dates.

  - Hereunder is an example of GetHisto results depending on filter and carry over option:



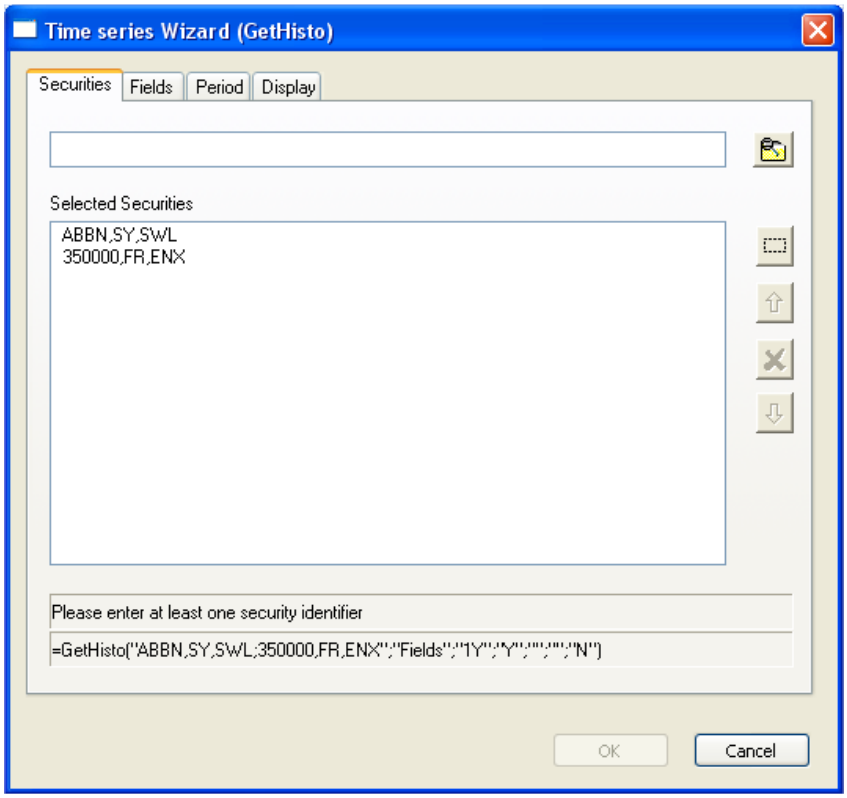
3.2.2. GetHisto Wizard

The GetHisto Wizard offers assistance to new users in creating a GetHisto function for a limited number of securities and fields. It is composed of four tabs.

- **The Securities Tab**

The Securities tab is used to select securities.

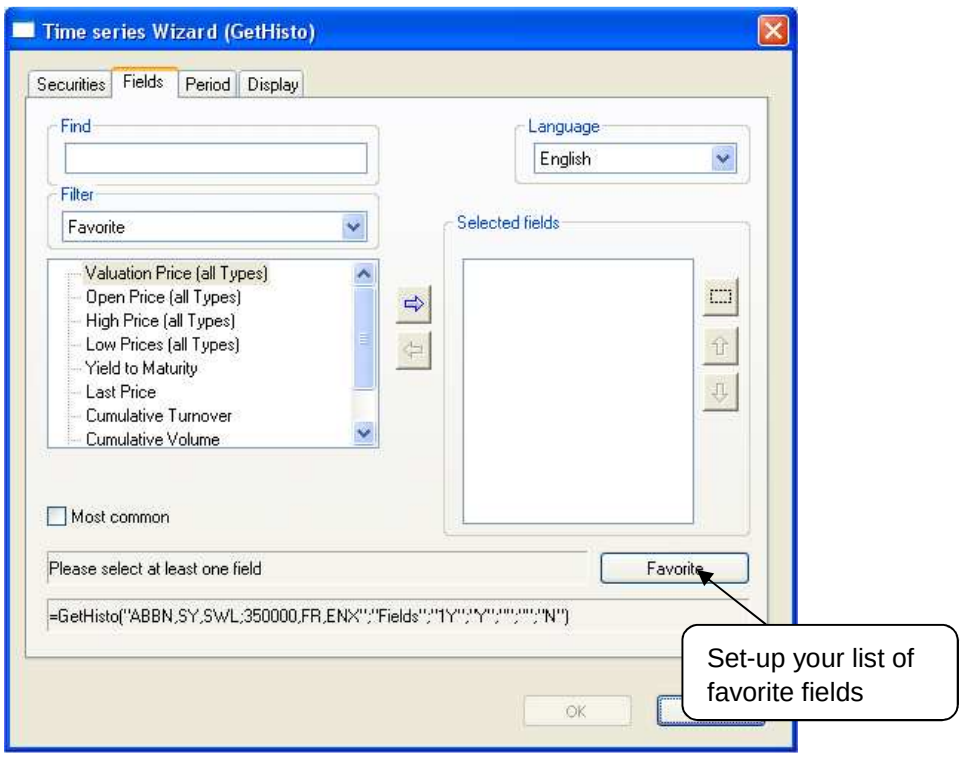
- This information is MANDATORY: at least one security has to be selected before the function can be inserted.
- N.B.: the maximum number of securities allowed in this function is submitted to entitlement and depends on your TKiD package.



- **The Fields Tab**

The second tab, Fields, is used to specify fields the function will contain.

- This information is MANDATORY, meaning at least one field has to be selected before the function can be inserted.
- N.B.: a "favorite" function allows you to set up a restricted list of favorite fields and attributes you will find more easily your most frequently used fields if you create this list.



- **The Period Tab**

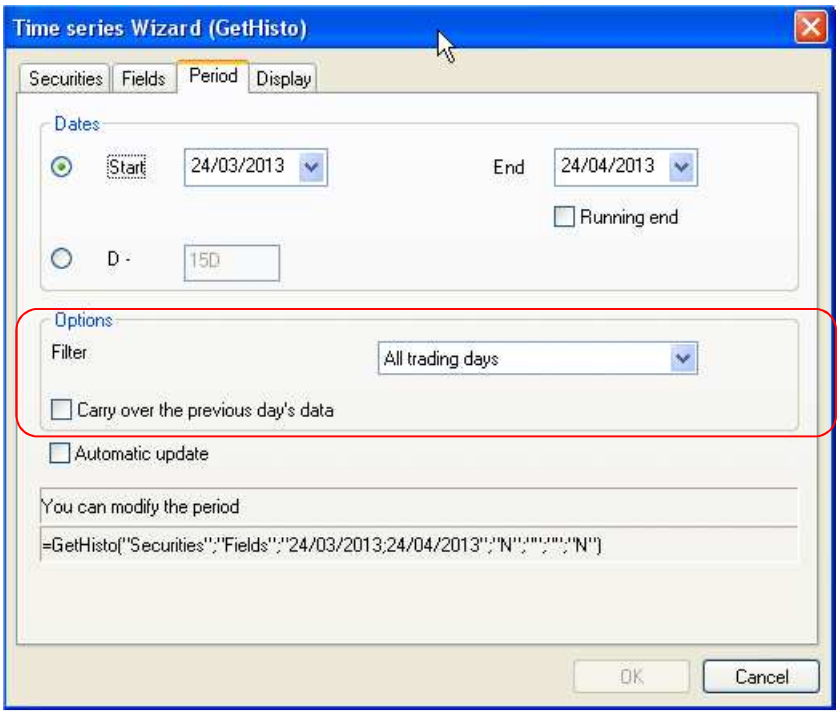
The third tab, “Period”, defines the historical range required by the user. It also allows setting the automatic update.

- This information is MANDATORY. Default parameters are proposed when using the wizard.
- The frame “Options” handles the new filter and Carry over options (see GetHisto Function).

Default values are:

- All trading days.
- Carry over unchecked.

When a different filter value is set, “carry over” is automatically checked (being the most probable choice), but still can be unchecked.



- **The Display Tab**

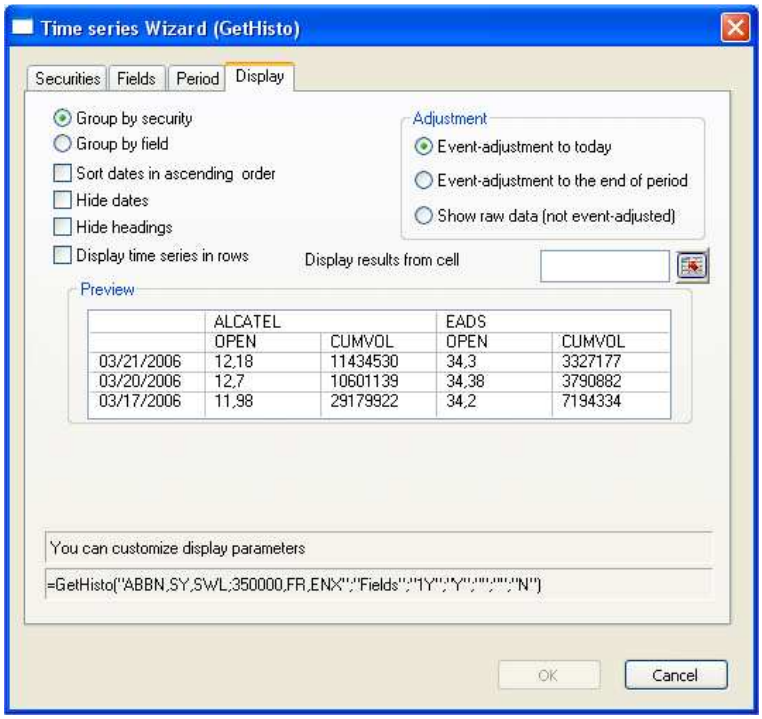
Finally, the fourth tab sets optional display parameters of the queried data - grouping by variable or security, sorting by dates and displaying raw or event-adjusted data, hiding dates or hiding headings.

Former checkbox “Display only quotes” is replaced with the following ones:

- Hide dates
- Hide headings

If GetHisto wizard is recalled for a formula containing “PRICE”, both Hide headings and Hide dates checkboxes will be selected and HIDE_HEADINGS and HIDE_DATE parameters will be used in the final formula, instead of the original parameter.

This tab also includes a new checkbox, “Display times series in rows”, to handle new setting INV.



3.3. GetSnap

3.3.1. GetSnap Function

GetSnap is a function retrieving last known quotes at a given date.
GetSnap syntax is the following:

=GetSnap("SECURITIES";"FIELD";"DATE";"AUTOREFRESH";"DISPLAY";TARGETCELL)

SECURITIES: Security's identifiers. (See 2.4.1. Securities insertion)

FIELD: One pricing field of your choice.

DATE: A date in accordance with the format set in your regional settings options.
Today's date is not eligible: if you enter today's date as a parameter for GetSnap function, FinXL will return the error message: "invalid date".

AUTOREFRESH: Automatic refresh of the data can be set:
No parameter or "N" disables the automatic refresh.
"Y" makes refresh automatic for any change of an entry parameter.
See chapter 2.3

DISPLAY: Optional parameters separated by ";".
Five parameters are available:

- INST = display security names
- NAME = display field names
- INV = display fields in rows instead of columns
- DATE = display date for last known quote
- RAW = display raw data display raw data (no data adjustment). Please note that if an event affecting data occurred after the requested date, the displayed data will not take it into account Data adjustment to today is set as default value.
(See example on data adjustment in GetHisto function display parameters).

TARGETCELL: Optional origin for displaying result (see 2.5 Result display of FinXL functions)

- **GetSnap functions, examples**
  - Using explicit parameters:

=GetSnap ("ABBN,SY,380";"LAST";"31/12/2009"): display the last traded price for ABBN on the 31th December 2009. There will not be any automatic refresh and the price will be the only data displayed.

  - Using cell references:

=GetSnap(A2:A10;B1;C1;"Y";"NAME;INST"): create a table using cells A2:A10 as a list of securities, cell B1 as price field, C1 as the date. There will be an automatic refresh and the names of securities and fields will be displayed.

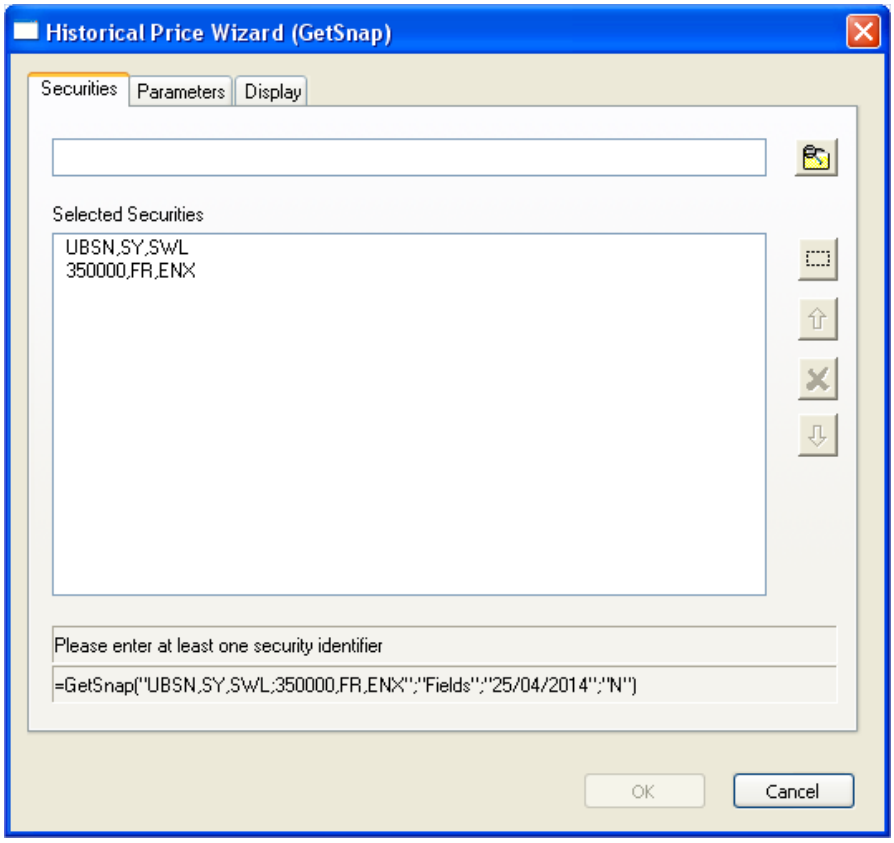
3.3.2. GetSnap Wizard

The GetSnap Wizard offers assistance to new users in creating a GetSnap function for a limited number of securities and fields. It is composed of three tabs.

- **The Securities Tab**

The Securities tab enables to select securities to use within the function.

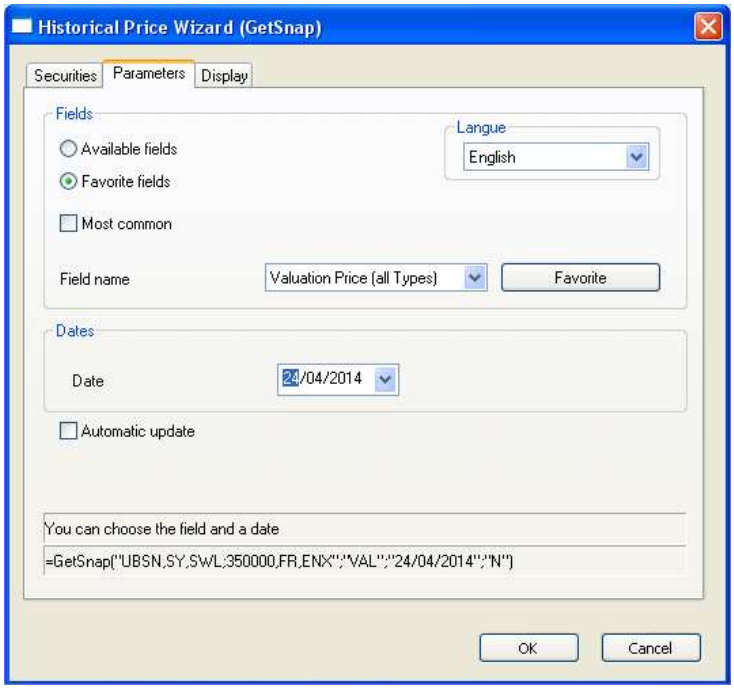
This information is MANDATORY: at least one security has to be selected before the function can be inserted.



- **The Parameters Tab**

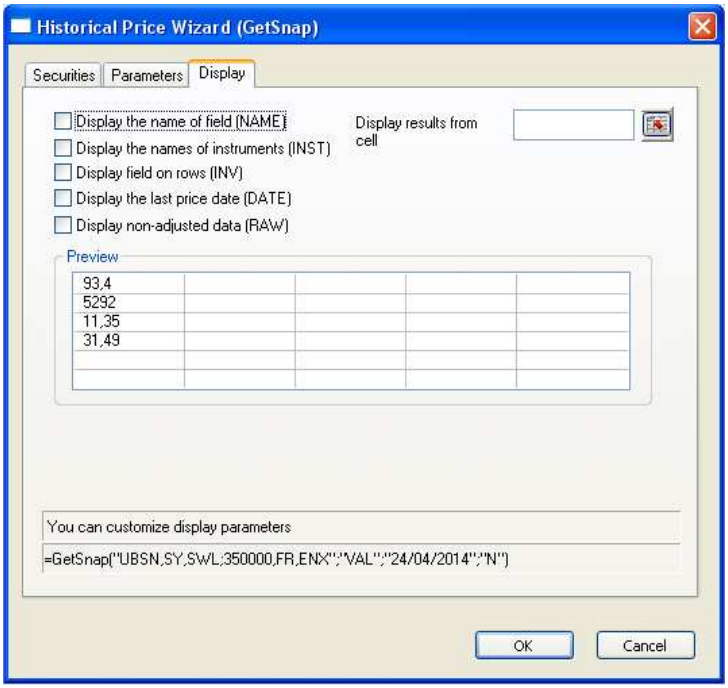
The second tab, “Parameters”, is used to specify the single field that the function will display and the date on which information is requested. It also allows setting the automatic update.

  - This information is MANDATORY, but default values are provided (date = today-1).
  - N.B.: a "favourite" function allows you to set up a restricted list of favourite fields in which you will find more easily the fields you need the most.



- **The Display Tab**

Finally, the third tab defines optional parameters controlling the display of field names, securities’ names and dates, the inversion of rows and columns and the inactivation of data adjustment. The target can also be defined in this tab.



3.4. CalcRate

CalcRate is a function available in Telekurs FinXL, which enables to calculate interpolated rates from a selection of benchmarks.

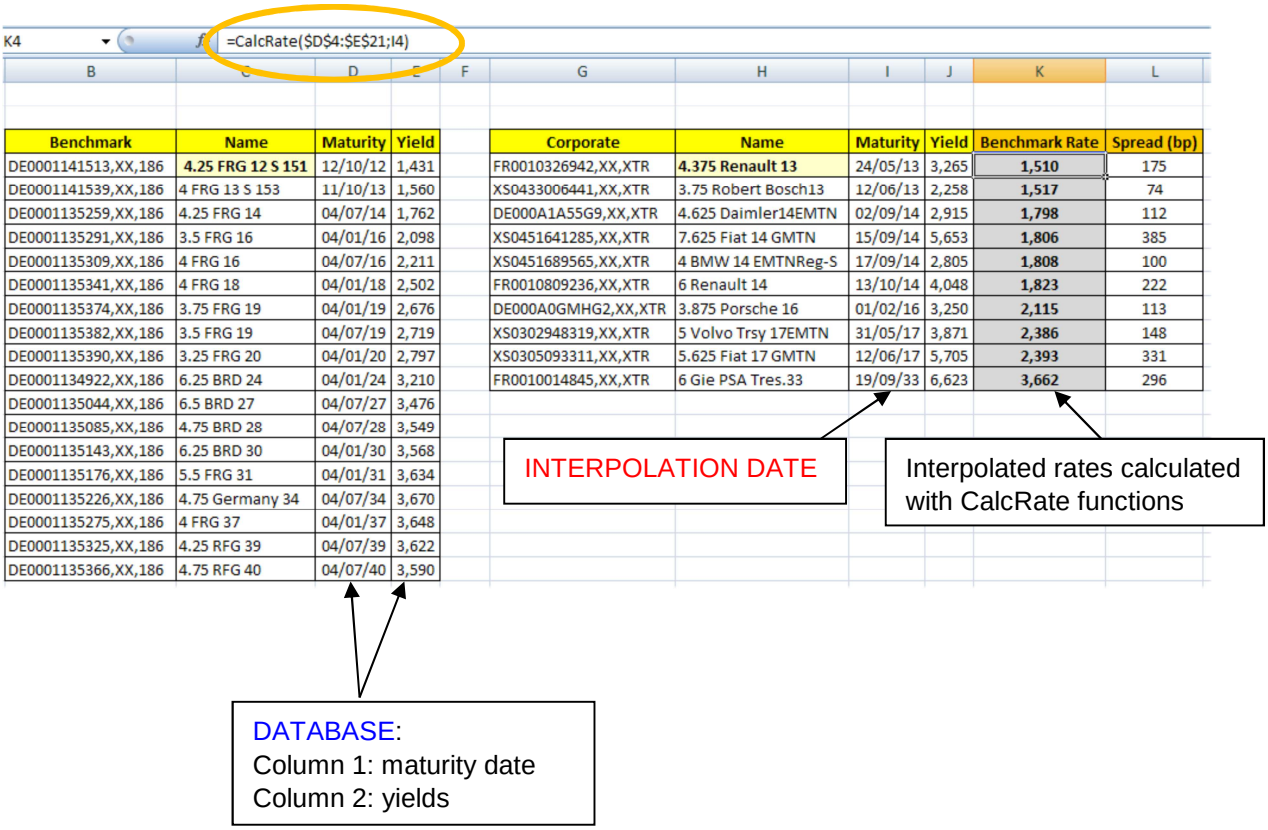
No FinXL wizard exists for this function, but you can generate it with the assistance of the associated Excel wizard.

CalcRate syntax is the following:

=CalcRate ("DATABASE";"INTERPOLATION DATE")

DATABASE: This parameter must be a cell range of two consecutive columns displaying maturity dates in the first one and their associated rates in the second one. These two columns must be sorted from the nearest maturity to the furthest.

INTERPOLATION DATE: a date in accordance with the format set in user's regional settings options or an identifier of a cell containing a date with the proper syntax.



Benchmark	Name	Maturity	Yield
DE0001141513,XX,186	**4.25 FRG 12 S 151**	12/10/12	1,431
DE0001141539,XX,186	4 FRG 13 S 153	11/10/13	1,560
DE0001135259,XX,186	4.25 FRG 14	04/07/14	1,762
DE0001135291,XX,186	3.5 FRG 16	04/01/16	2,098
DE0001135309,XX,186	4 FRG 16	04/07/16	2,211
DE0001135341,XX,186	4 FRG 18	04/01/18	2,502
DE0001135374,XX,186	3.75 FRG 19	04/01/19	2,676
DE0001135382,XX,186	3.5 FRG 19	04/07/19	2,719
DE0001135390,XX,186	3.25 FRG 20	04/01/20	2,797
DE0001134922,XX,186	6.25 BRD 24	04/01/24	3,210
DE0001135044,XX,186	6.5 BRD 27	04/07/27	3,476
DE0001135085,XX,186	4.75 BRD 28	04/07/28	3,549
DE0001135143,XX,186	6.25 BRD 30	04/01/30	3,568
DE0001135176,XX,186	5.5 FRG 31	04/01/31	3,634
DE0001135226,XX,186	4.75 Germany 34	04/07/34	3,670
DE0001135275,XX,186	4 FRG 37	04/01/37	3,648
DE0001135325,XX,186	4.25 RFG 39	04/07/39	3,622
DE0001135366,XX,186	4.75 RFG 40	04/07/40	3,590

Corporate	Name	Maturity	Yield	Benchmark Rate	Spread (bp)
FR0010326942,XX,XTR	**4.375 Renault 13**	24/05/13	3,265	**1,510**	175
XS0433006441,XX,XTR	3.75 Robert Bosch13	12/06/13	2,258	**1,517**	74
DE000A1A55G9,XX,XTR	4.625 Daimler14EMTN	02/09/14	2,915	**1,798**	112
XS0451641285,XX,XTR	7.625 Fiat 14 GMTN	15/09/14	5,653	**1,806**	385
XS0451689565,XX,XTR	4 BMW 14 EMTNReg-S	17/09/14	2,805	**1,808**	100
FR0010809236,XX,XTR	6 Renault 14	13/10/14	4,048	**1,823**	222
DE000A0GMHG2,XX,XTR	3.875 Porsche 16	01/02/16	3,250	**2,115**	113
XS0302948319,XX,XTR	5 Volvo Trsy 17EMTN	31/05/17	3,871	**2,386**	148
XS0305093311,XX,XTR	5.625 Fiat 17 GMTN	12/06/17	5,705	**2,393**	331
FR0010014845,XX,XTR	6 Gie PSA Tres.33	19/09/33	6,623	**3,662**	296

3.5. CalcBond

3.5.1. CalcBond Function

CalcBond is a function which delivers actuarial calculations on bonds.
CalcBond syntax is the following:

=CalcBond("SECURITY";"FIELDS";"CALCULATION DATE";"TYPE";"VALUE" ;"CALCULATION FORMULA";"CALL OPTION DATE";"REDEMPTION PRICE"; "AUTOREFRESH";"DISPLAY";TARGETCELL)

SECURITY: One security identifier. (See 2.4.1. Securities insertion)

FIELDS: Fields codes separated by ";".

Eligible fields are limited to actuarial calculation data:

Accrued interest	Average life
Price	Duration
Yield	Modified duration
Basis point value	Convexity

CALCULATION DATE: Date in accordance with the date format set in your regional settings options, used for the calculation (settlement date)

TYPE: Parameter defining which type of quote is used for the actuarial calculation, either "PRICE" or "YIELD".

VALUE: Value of the quote to be used for the calculation, either price or yield, following the "###.#####" syntax.

CALCULATION FORMULA: Parameter defining yield-to-maturity calculation formula: “ICMA”, “CNO”, “MOOSMULLER” or “STREET”.

CALL OPTION DATE: Simulate a call option date in accordance with the format set in your regional settings options. This parameter is optional.

REDEMPTION PRICE: Simulate a redemption price to be used for the calculation. This parameter is optional.

AUTOREFRESH: Automatic refresh of the data can be set up:
No parameter or "Y" makes refresh automatic for any change of an entry parameter.
"N" disables the automatic refresh.
See chapter 2.3

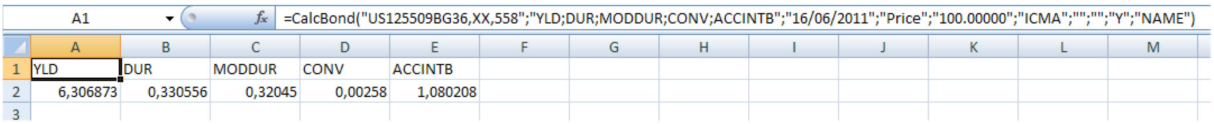
DISPLAY: Optional parameters separated by ";".
Three parameters are available:

- INST = display security names
- NAME = display field names
- INV = display fields in rows instead of columns.

TARGETCELL: Optional origin for displaying result (see 2.5 Result display of FinXL functions)

- **CalcBond functions, examples**
  - Using explicit parameters:

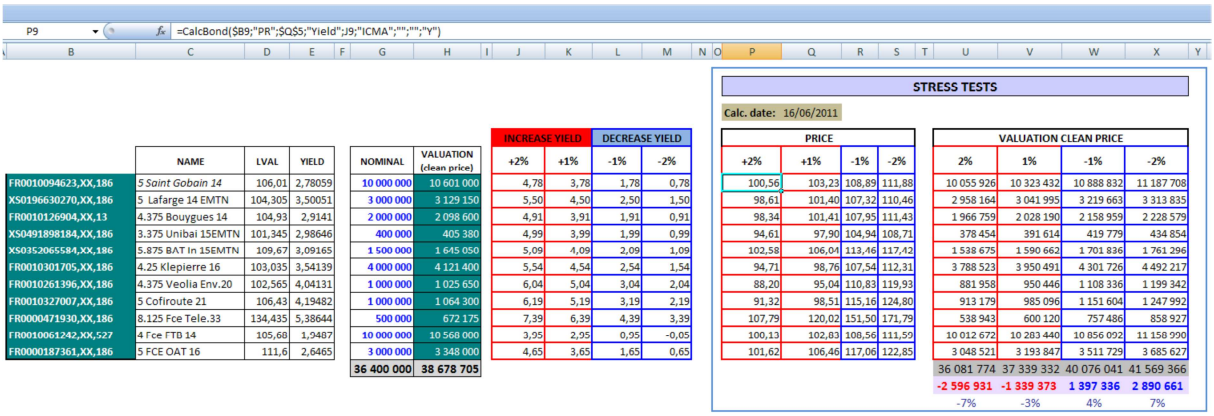
=CalcBond("XS0794245018,XX,186";"YLD;DUR;MODDUR;CONV;ACCINT";"16/06/2012";"Price";"100.00000";"ICMA";"";"";"Y";"NAME")



	A	B	C	D	E
1	YLD	DUR	MODDUR	CONV	ACCINTB
2	6,306873	0,330556	0,32045	0,00258	1,080208
3					

  - Using cell references:

=CalcBond ($B9;"PR";$Q$5;"Yield";J9;"ICMA";"";"";"Y")



	NAME	LVAL	YIELD	NOMINAL	VALUATION (clean price)	+2%	+1%	-1%	-2%	+2%	+1%	-1%	-2%	2%	1%	-1%	-2%
FR0010094623,XX,186	*5 Saint Gobain 14*	106,01	2,78059	10 000 000	10 601 000	4,78	3,78	1,78	0,78	100,56	103,23	108,89	111,88	10 055 926	10 323 432	10 888 832	11 187 708
XS0196630270,XX,186	5 Lafarge 14 EMTN	104,305	3,50051	3 000 000	3 129 150	5,50	4,50	2,50	1,50	98,61	101,40	107,32	110,46	2 958 164	3 041 995	3 219 663	3 313 835
FR0010126904,XX,13	4.375 Bouygues 14	104,93	2,9141	2 000 000	2 098 600	4,91	3,91	1,91	0,91	98,34	101,41	107,95	111,43	1 966 759	2 028 190	2 158 959	2 228 579
XS0491898184,XX,186	3.375 Unibai 15EMTN	101,345	2,98646	400 000	405 380	4,99	3,99	1,99	0,99	94,61	97,90	104,94	108,71	378 454	391 614	419 779	434 854
XS0352065584,XX,186	5.875 BAT In 15EMTN	109,67	3,09165	1 500 000	1 645 050	5,09	4,09	2,09	1,09	102,58	106,04	113,46	117,42	1 538 675	1 590 662	1 701 836	1 761 296
FR0010301705,XX,186	4.25 Klepierre 16	103,035	3,54139	4 000 000	4 121 400	5,54	4,54	2,54	1,54	94,71	98,76	107,54	112,31	3 788 523	3 950 491	4 301 726	4 492 217
FR0010261396,XX,186	4.375 Veolia Env.20	102,565	4,04131	1 000 000	1 025 650	6,04	5,04	3,04	2,04	88,20	95,04	110,83	119,93	881 958	950 446	1 108 336	1 199 342
FR0010327007,XX,186	5 Cofiroute 21	106,43	4,19482	1 000 000	1 064 300	6,19	5,19	3,19	2,19	91,32	98,51	115,16	124,80	913 179	985 096	1 151 604	1 247 992
FR0000471930,XX,186	8.125 Fce Tele.33	134,435	5,38644	500 000	672 175	7,39	6,39	4,39	3,39	107,79	120,02	151,50	171,79	538 943	600 120	757 486	858 927
FR0010061242,XX,527	4 Fce FTB 14	105,68	1,9487	10 000 000	10 568 000	3,95	2,95	0,95	-0,05	100,13	102,83	108,56	111,59	10 012 672	10 283 440	10 856 092	11 158 990
FR0000187361,XX,186	5 FCE OAT 16	111,6	2,6465	3 000 000	3 348 000	4,65	3,65	1,65	0,65	101,62	106,46	117,06	122,85	3 048 521	3 193 847	3 511 729	3 685 627
				36 400 000	38 678 705									36 081 774	37 339 332	40 076 041	41 569 366
														-2 596 931	-1 339 373	1 397 336	2 890 661
														-7%	-3%	4%	7%

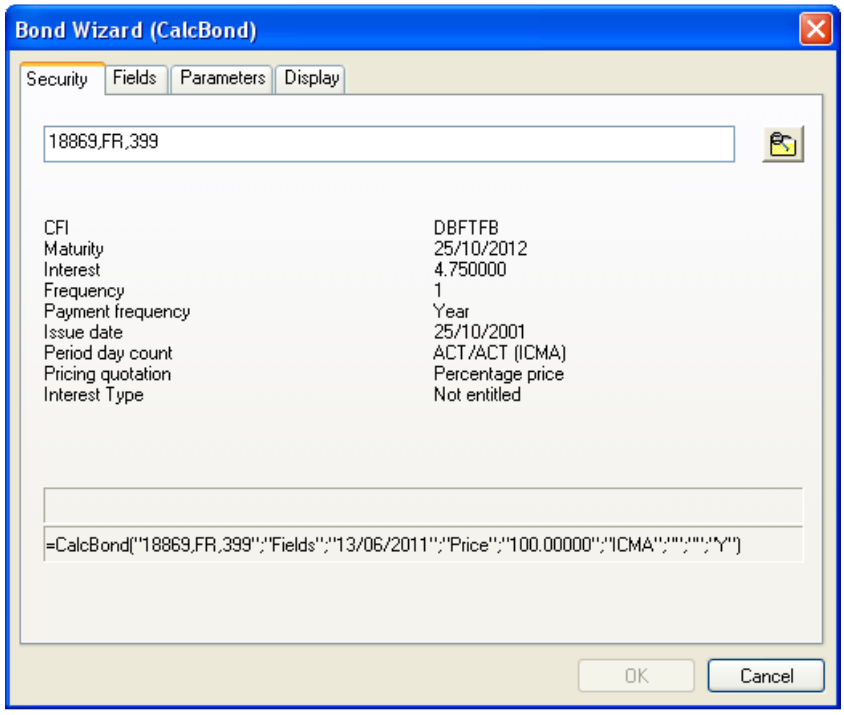
3.5.2. CalcBond Wizard

The CalcBond Wizard offers assistance to new users in creating a CalcBond function for a single security and for a limited number of fields. It is composed of four tabs.

- **The Security Tab**

The Security tab is used to select the security to use within the function.

  - This information is MANDATORY: a security has to be selected before the function can be inserted.
  - When a security is selected, some bond characteristics are displayed:

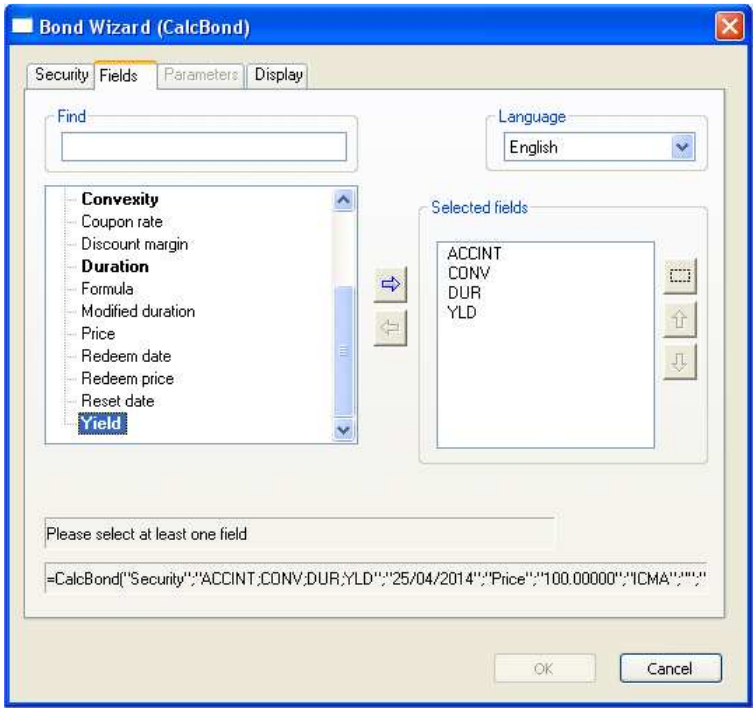


- If Calcbond cannot analyse this type of security, an error message is automatically displayed, informing the user about the error's type (invalid reference data, pricing quotation not supported, issue date unknown, …)

- **The Fields Tab**

The second tab, "Fields", is used to specify the fields that the function will display.

- This information is MANDATORY: at least one field has to be selected before the function can be inserted.
- Besides actuarial calculation fields, the list contains all calculation inputs parameters.



- **The Parameters Tab**

The third tab, “Parameters”, defines the calculation inputs parameters:

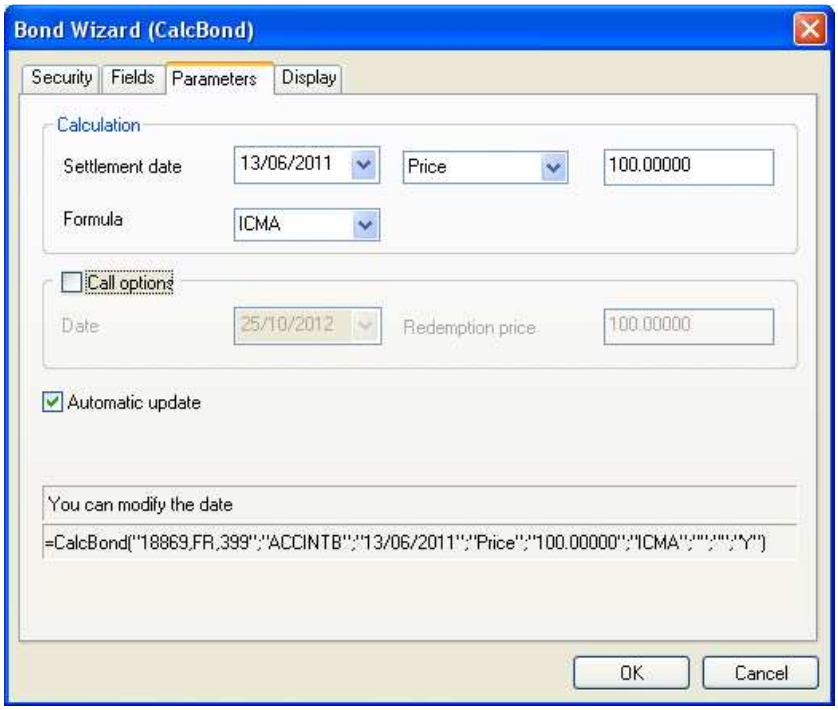
- settlement date
- simulated price/yield
- calculation formula
- for callable and index-linked bonds, additional parameters are available after clicking on “Call options” checkbox : simulation of a call option date and the associated redemption price.

This tab also allows setting the automatic update flag.

- These information are MANDATORY and filled-in by default.

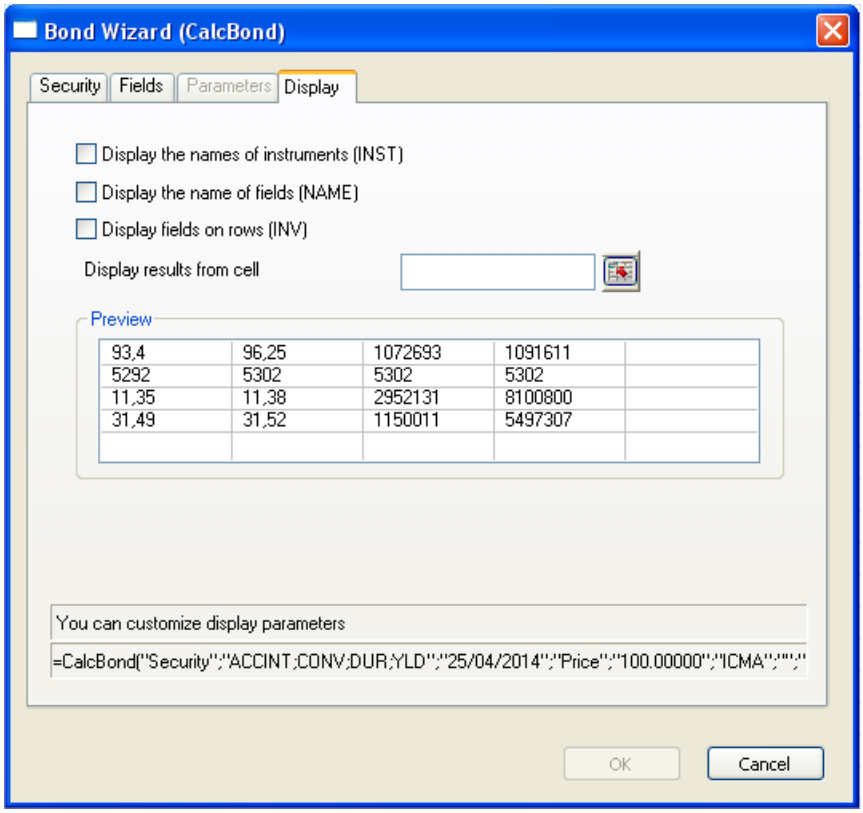
settlement date	Today
simulated price	100.00000
simulated yield	0.00000
calculation formula	ICMA
call option date	bonds’maturity date
redemption price	100.00000

- N.B.: This tab is accessible only if CalcBond can deliver calculations for this type of security



- **The Display Tab**

Finally, the fourth tab defines optional parameters allowing the display of field names and the inversion of rows and columns.



3.6. SimulBond and BondManager wizard

3.6.1. BondManager wizard

The BondManager Wizard provides assistance in creating private bonds.
Bond characteristics are inserted in Excel sheet in order to be used by SimulBond function as an entry parameter.

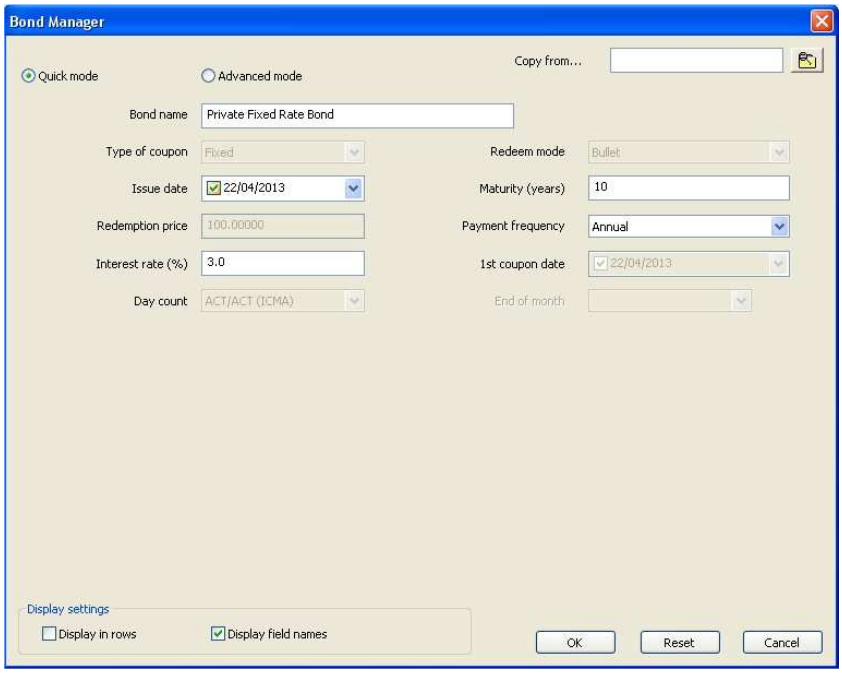
Whatever insertion mode is used, a 23 cells range describing the bond will be pasted in the sheet, starting from current cell.
By default, field names are also inserted. This feature can be disabled, by unchecking “Display field names”.
It is also possible to enter the bond parameters in row: “Display in rows” checkbox.

- **Quick mode**

This mode allows the creation of plain vanilla bonds (i.e. fixed rate bullet bonds) very easily.

You just have to provide the following features:

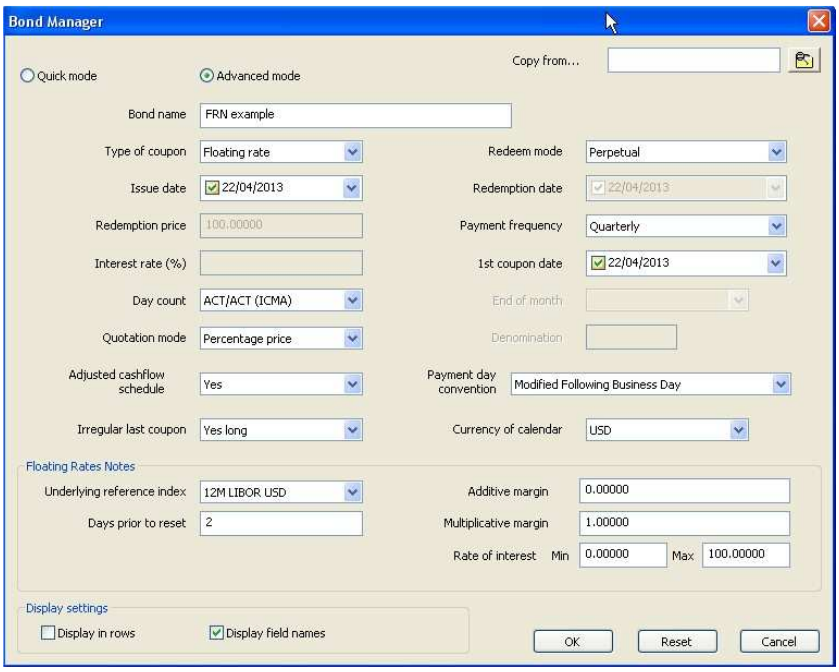
- Issue date.
- Maturity in years.
- Payment frequency.
- Interest rate.
- Bond name (optional).



The complete cash flow schedule will be calculated from those few inputs.

- **Advanced mode**

Advanced mode is requested to create FRN or non-vanilla fixed coupon bonds.



This mode allows the user to enter a lot more bond characteristics in order to simulate a custom-made bond.

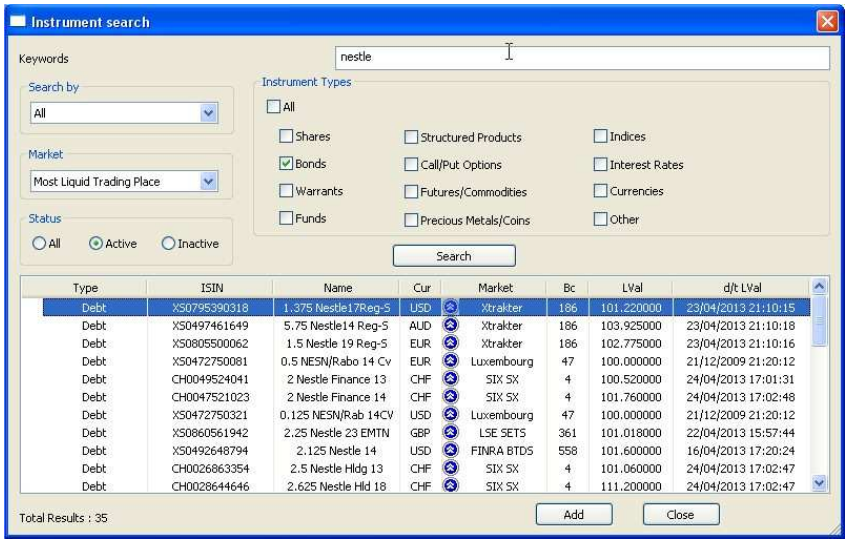
- **Fields description for Quick and Advanced mode**

Fields' name	Description	Advanced mode	Quick mode
Bond name	Name of the bond	Optional	input
Type of coupon	Fixed / floating rate	Always mandatory	Fixed
Redeem mode	Bullet / perpetual	Always mandatory	Bullet
Issue date	Date of the operation	Always mandatory	input
Redemption date	Date of reimbursement	Only for Bullet bonds	Automatically Calculated with **maturity** (input) and assuming no odd coupon
Redemption price	Reimbursement price	Only for Bullet bonds	100.00000
Payment frequency	Frequency of payments	Always mandatory	input
Interest rate (%)	Nominal rate	Only for fixed Bond	input
1st coupon date	Allows to detect irregular 1st coupon	Always mandatory Except for Zero Coupon bonds.	Automatically Calculated with **maturity** (input) and payment frequency assuming no odd coupon.
Day count	Time counting method	Always mandatory optional – Set to ACT/ACT (ICMA) by default	ACT/ACT (ICMA)
End of month	Option on payment days	Only for 30/360 US Muni and 30U/360 day count options – optional set to No by default.	Set to No by default

Quotation mode	Percentage price / Unit	Always mandatory	Percentage price
Denomination	Nominal price	Only for Unit quotation mode option	N/A
Adjusted cash flow schedule	Adjust payment days on working days only	optional -set to No by default for Fixed and to Yes for FRN	No schedule adjustment
Payment day convention	Option of calendar adjustment	optional set to Modified Following Business Day by default if adjusted cash flow input is set to Yes	N/A
Currency of calendar	Calendar's adjustment to a specific region identified by its currency	Optional. Set to Bond currency by default when adjusted cash flow schedule is set to yes	N/A
Irregular last coupon	No / Yes short / Yes long	Optional - Automatically assumes No or Short if not manually set.	Quick mode assumes no odd coupon
Information for floating rate notes			
Underlying reference index	Index of reference for the floating rate calculation	Always mandatory	N/A
Additive margin	Additive supplement rate	Optional – Set to 0 by default	N/A
Multiplicative margin	Multiplicative supplement rate	Optional – Set to 1 by	N/A
Rate of interest	Min/Max payment parameters	Optional Range set to [0;100] by default	N/A
Days prior to reset	Time reference for the index	Optional Set to 2 days by default	N/A

- **Copying characteristics of an existing bond**

An existing Bond can be used as a master to create more quickly a private bond. To this effect, field "Copy from…" on the top right corner of the wizard allows direct entry of an existing bond listing code. When code is unknown, use the "Search listing" button to open FinXL Search wizard, where Instrument Type will be set by default on "bonds only".


Instrument search
Keywords
nestle
Search by
All
Market
Most Liquid Trading Place
Status
All
Active
Inactive
Instrument Types
All
Shares
Structured Products
Indices
Bonds
Call/Put Options
Interest Rates
Warrants
Futures/Commodities
Currencies
Funds
Precious Metals/Coins
Other
Search
Type ISIN Name Cur Market Bc LVal d/t LVal
Debt XS0795390318 1.375 Nestle17Reg-S USD Xtrakter 186 101.220000 23/04/2013 21:10:15
Debt XS0497461649 5.75 Nestle14 Reg-S AUD Xtrakter 186 103.925000 23/04/2013 21:10:18
Debt XS0805500062 1.5 Nestle 19 Reg-S EUR Xtrakter 186 102.775000 23/04/2013 21:10:16
Debt XS0472750081 0.5 NESN/Rabo 14 Cv EUR Luxembourg 47 100.000000 21/12/2009 21:20:12
Debt CH0049524041 2 Nestle Finance 13 CHF SIX SX 4 100.520000 24/04/2013 17:01:31
Debt CH0047521023 2 Nestle Finance 14 CHF SIX SX 4 101.760000 24/04/2013 17:02:48
Debt XS0472750321 0.125 NESN/Rab 14CV USD Luxembourg 47 100.000000 21/12/2009 21:20:12
Debt XS0860561942 2.25 Nestle 23 EMTN GBP LSE SETS 361 101.018000 22/04/2013 15:57:44
Debt XS0492648794 2.125 Nestle 14 USD FINRA BTDS 558 101.600000 16/04/2013 17:20:24
Debt CH0026863354 2.5 Nestle Hldg 13 CHF SIX SX 4 101.060000 24/04/2013 17:02:47
Debt CH0028644646 2.625 Nestle Hld 18 CHF SIX SX 4 111.200000 24/04/2013 17:02:47
Total Results : 35
Add
Close

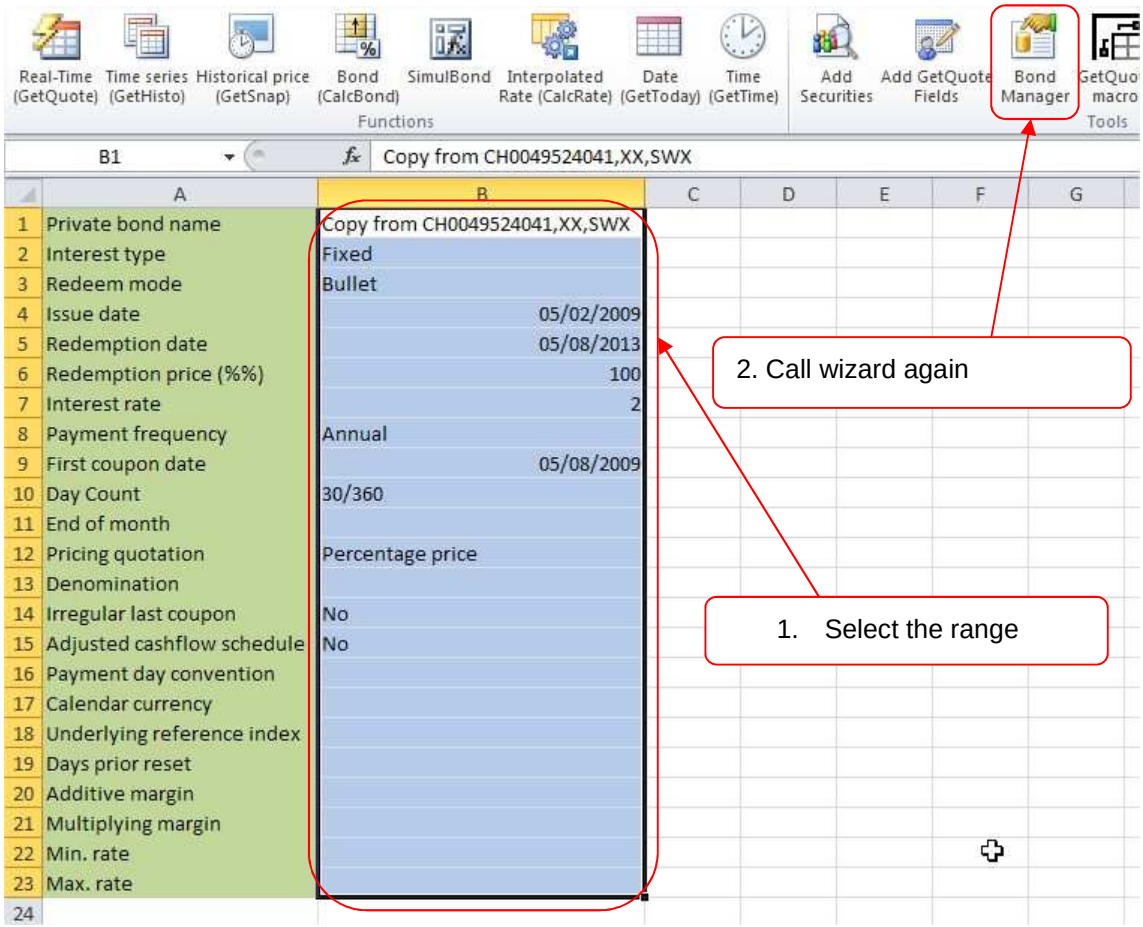
When an existing bond is invoked using one of these two methods, BondManager Wizard mode is automatically switched to "Advanced".

Warning: some FRN information needed by SimulBond is today available only through VDB pages rather than through TKiD fields. When copying characteristics from an existing FRN bond, you'll still have to feed manually the "Floating Rate Notes" section of the wizard.

- **Prerequisite to BondManager wizard recall**

If you want to change part of the characteristics of a private bond already defined with BondManager, it is often easier to recall the wizard rather than editing directly the cells' content.

As BondManager feeds a 23 cell array and not a single cell as other FinXL functions do, you need to select again the proper 23 cell array containing the private bond characteristics before calling the wizard.



	A	B
1	Private bond name	Copy from CH0049524041,XX,SWX
2	Interest type	Fixed
3	Redeem mode	Bullet
4	Issue date	05/02/2009
5	Redemption date	05/08/2013
6	Redemption price (%%)	100
7	Interest rate	2
8	Payment frequency	Annual
9	First coupon date	05/08/2009
10	Day Count	30/360
11	End of month	
12	Pricing quotation	Percentage price
13	Denomination	
14	Irregular last coupon	No
15	Adjusted cashflow schedule	No
16	Payment day convention	
17	Calendar currency	
18	Underlying reference index	
19	Days prior reset	
20	Additive margin	
21	Multiplying margin	
22	Min. rate	
23	Max. rate	
24		

3.6.2. SimulBond Function

SimulBond is a new function available in Telekurs FinXL 1.4. It offers actuarial calculations on private bonds.
SimulBond syntax is the following:

=SimulBond (SECURITY;"FIELDS";"CALCULATION DATE";"TYPE";"VALUE" ;"CALCULATION FORMULA";"AUTOREFRESH";"DISPLAY";TARGETCELL)

SECURITY: cell range that contains the bond characteristics.

It can be either a named range or a 23-cell explicit range. See documentation of new wizard BondManager for details on the requested content.

N.B.1: if the issue date or/and the redemption price are not filled in, the bond will be considered as perpetual even though you have chosen the “bullet” redeem mode option.

N.B.2: if the underlying reference index is not filled in, the bond will be considered as a FRN even though you have chosen the “fixed” type of coupon option.

FIELDS: Field codes separated by ";".

Simulbond offers the list of fields already available with Calcbond function, plus four fields specific to FRN calculations (outlined in blue).

Accrued interest	Convexity	Name
Assumed rate	Coupon rate	Price
Assumed rate date	Discount margin	Redeem date
Average life	Duration	Redeem price
Basis point value	Formula	Reset date
Calc date	Modified duration	Yield

CALCULATION DATE: Settlement date of the calculation, expressed in the date format set in your regional settings options.

TYPE: Parameter defining which type of input is used for the calculation, either "PRICE" or "YIELD".

VALUE: Value of the quote to be used for the calculation, either price or yield, following the "###.#####" syntax.

CALCULATION FORMULA: Parameter defining yield-to-maturity calculation formula: “ICMA”, “CNO”, “MOOSMULLER” or “STREET” for a fixed bond; "DISCOUNT_MARGIN" for a FRN.

AUTOREFRESH: Automatic refresh of the data can be set up:

"Y" enables an automatic refresh of the formula results after any change of an entry parameter.

No parameter or "N" disables the automatic refresh.
See chapter 2.3

DISPLAY: Optional parameters separated by ";".

Three settings are available:

- INST = display the name of the private bond. If defined, the first parameter inserted by BondManager is used as a bond name.
- NAME = display field names
- INV = display fields in rows instead of columns.

TARGETCELL: Display result starting from that cell (*optional*)

- **SimulBond Function, Example**
  - Using explicit parameters:

=SimulBond(A1:A23;"YLD;DUR;MODDUR;CONV;ACCINT";
"16/06/2011";"Price";"100.00000";"ICMA";"Y";"NAME")

3.6.3. SimulBond wizard

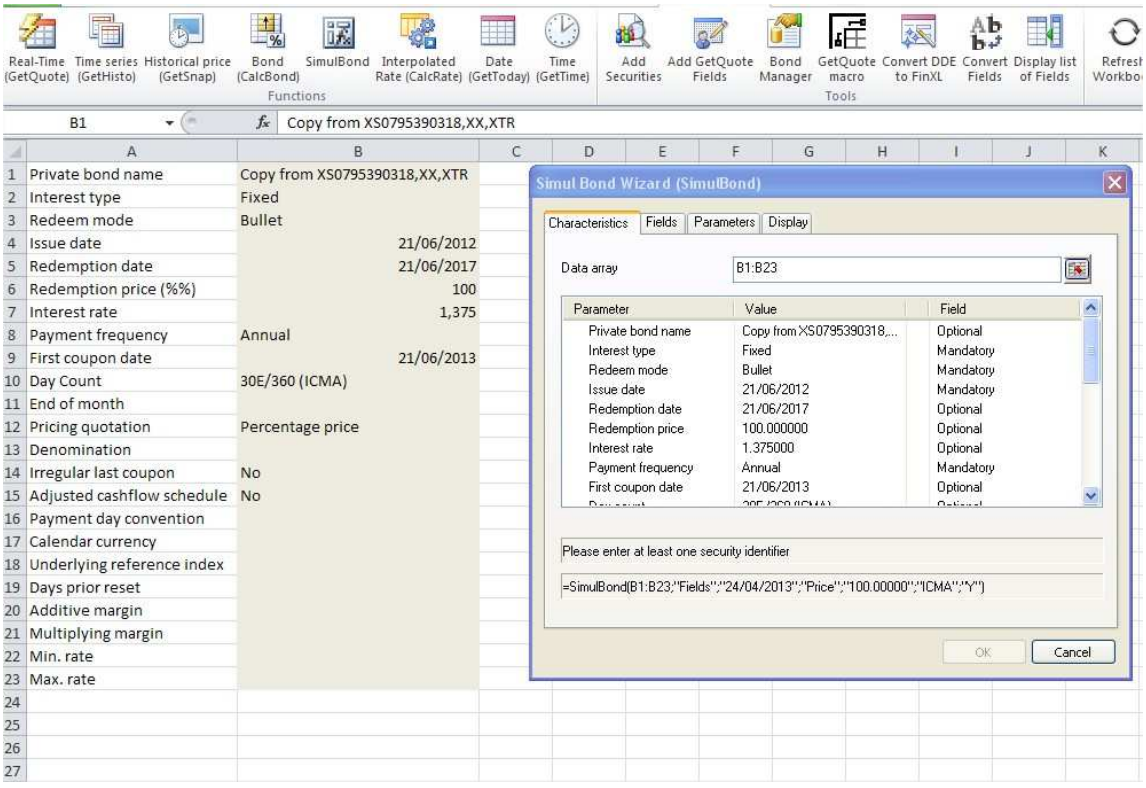
The SimulBond Wizard offers assistance to new users in creating a SimulBond function on a private bond. It is composed of four tabs.

- **The Characteristics Tab**

The Characteristics tab is used to select the cell range containing information on the private bond.

- This information is MANDATORY: a range has to be selected before the function can be inserted.

We strongly recommend the use of BondManager wizard to fill-in the cell range in an appropriate manner. Private bonds can also be edited directly in Excel (entering a 23 continuous range of cells) but the range has to be filled-in following strictly the model given by BondManager (order of the information, codes…).



Once the private bond has been created and its characteristics edited in your Excel worksheet, you have 3 possibilities of filling-in the characteristics field:

You can:

- Select the range containing the requested information directly on the excel worksheet, outside the wizard (even those that are not filled-out: B1:B23 on the screen-shot above), and then click the array button into the characteristic tab, in order to integrate the information.

- Directly enter the cell range reference in the characteristic tab (B1:B23 on the screen-shot above).

- Or directly enter the name of the labelled range containing the information (for example: “my_private_bond” referring to cells B1:B23).

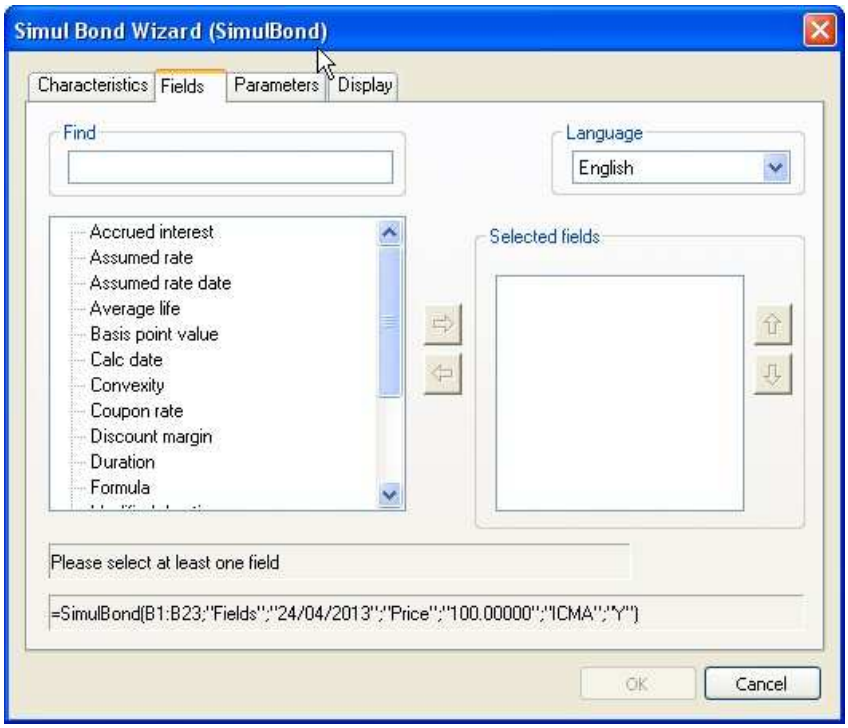
When a range is typed in the entry field or selected in Excel sheet and copied with array button , the range is analysed. If the size is correct (23 continuous cells), the bond characteristics are displayed in the control table in the midst of the tab.

If the selected range is not meeting consistency requirements, an error message is automatically displayed, informing the user about the error’s type.

- **The Fields Tab**

The second tab, “Fields,” is used to specify which fields the function will display.

- This information is MANDATORY: at least one field has to be selected before the function can be inserted.
- Besides actuarial calculation fields, the list contains all calculation inputs.
- For floating rate notes, four new fields have been added to the list already available within CalcBond wizard: Assumed rate, Assumed rate date, Discount margin, Reset date.



- **The Parameters Tab**

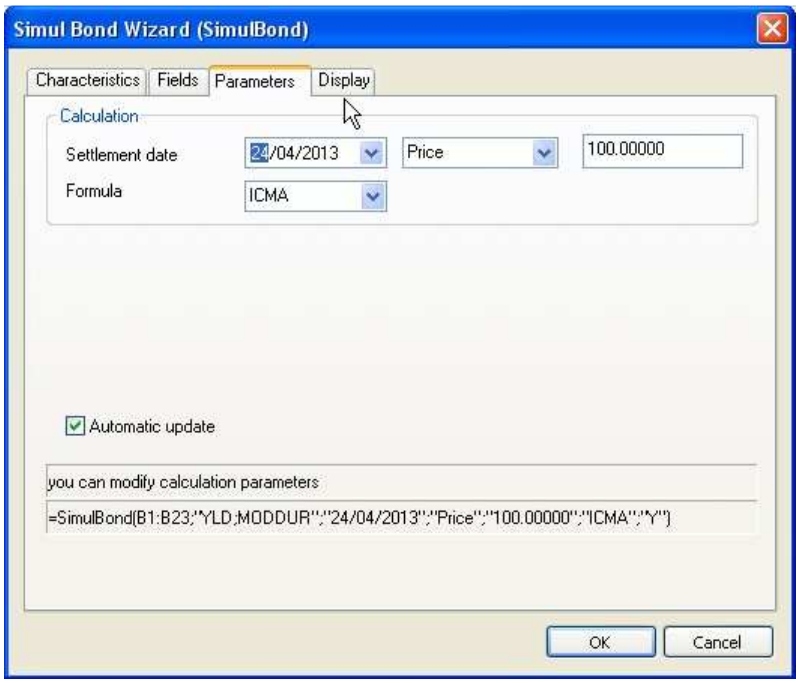
The third tab, “Parameters”, defines the calculation inputs parameters:

- settlement date
- simulated price/yield

- calculation formula
- These information are MANDATORY and filled-in by default.

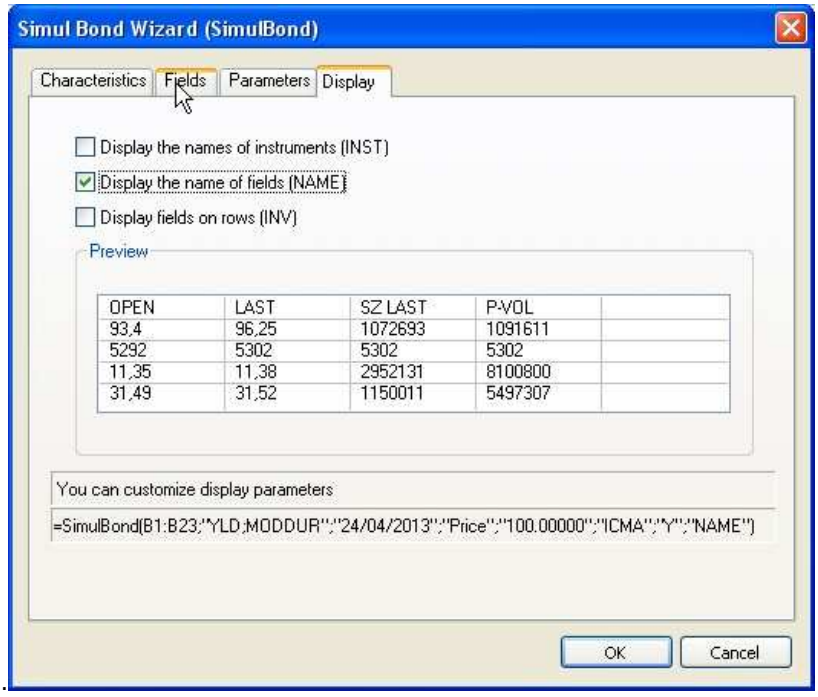
settlement date	Today
simulated price	100.00000
simulated yield	0.00000
calculation formula	ICMA

This tab also allows the setting of the automatic update feature.



- **The Display Tab**

The fourth and final tab handles optional parameters controlling display settings.



3.7. GetYieldCurve

3.7.1. GetYieldCurve function

GetYieldCurve is a new function available in Telekurs FinXL 1.5

This function displays a yield curve at a chosen date.
Warning : the purpose of this function is not to draw charts directly. The needed data is provided and the user can use Excel Chart tools.

GetYieldCurve syntax

=GetYieldCurve("YIELD_CURVE_IDENTIFIER";"DATE";"AUTOREFRESH";"DISPLAY"";TARGETCELL)

YIELD_CURVE_IDENTIFIER : name or yield curve code.

For the syntax of the yield curve identifiers, please refer to 2.2 GetYieldCurve identifiers syntax.

DATE: date of the yield curve.

The date can be expressed either as a fixed or a rolling date.

- Fixed dates should be expressed in accordance to the regional settings.
- Rolling dates: 3D, 1W, 5M or 1Y (D for current day)

AUTOREFRESH: Automatic refresh of the data can be set:
No parameter or "N" disables the automatic refresh.
"Y" makes refresh automatic for any change of an entry parameter.

DISPLAY: Optional parameters separated by ";".

Three settings are available:

- HIDE_HEADINGS = headings are not displayed.
- HIDE_INSTRUMENTS = only maturities and yields columns are displayed.
- INV = display fields in rows instead of columns.

As for any Excel function, the definition of parameters can be done outside the cell containing the formula itself, using cell references or Excel labelled ranges.

NB 1: Cell ranges or Excel labelled ranges should not be placed between double quotes.

NB 2: the use of a cell reference, which contains a volatile Excel function (such as "TODAY) should be avoided. We strongly recommend using FinXL function GetToday instead.

Examples

- Using explicit parameters:

  =GetYieldCurve("FRA_BTAN_OAT";"D")
  =GetYieldCurve("CORPORATE,AAA,CHF,Synthetic";"02/02/2014")

GetYieldCurve identifiers syntax

Two syntaxes can be used to identify yield curves:
- The name of the yield curve
- A 4-parameters descriptive syntax

The descriptive syntax

This syntax uses four fields separated with a comma

TYPE,SUBTYPE,CURRENCY,SOURCE

TYPE indicates the kind of yield curve:
- **GOV** governmental yield curves
- **SWAP** swap yield curves
- **CORPORATE** rating yield curves

SUBTYPE depends on type:
- For swaps, there are only two available choices :
  - **3M** for three month swaps
  - **6M** for six month swaps
- For governmental, country/region code is used (US, CH, DE, FR, , …)
- For corporates, value must be one of the following: **AAA**, **AA**, **A** or **BBB**.

CURRENCY is the currency code (USD, EUR, CHF, …) of the yield curve

SOURCE indicates the origin of the curve.
Two possible values for this field:
- Synthetic (source = Scanrate)
- Market (source= SFI France).

Examples of valid yield curve codes:

GOV,DE,EUR,SYNTHETIC	(EURGOVDE)
SWAP,6M,DKK,SYNTHETIC	(DKKSWAP)
CORPORATE,AAA,CHF,SYNTHETIC	(CHFAAA)

Requesting with the name

An alternative syntax can be used for requesting yield curves. The name of the curve is also allowed as first argument of GetYieldCurve function.

This identifier is the internal name of the Yield Curve displayed in Telekurs.
This name is also the first column in GetYieldCurve wizard.
Please refer to those lists if you want to use this syntax.

3.7.2. GetYieldCurve wizard

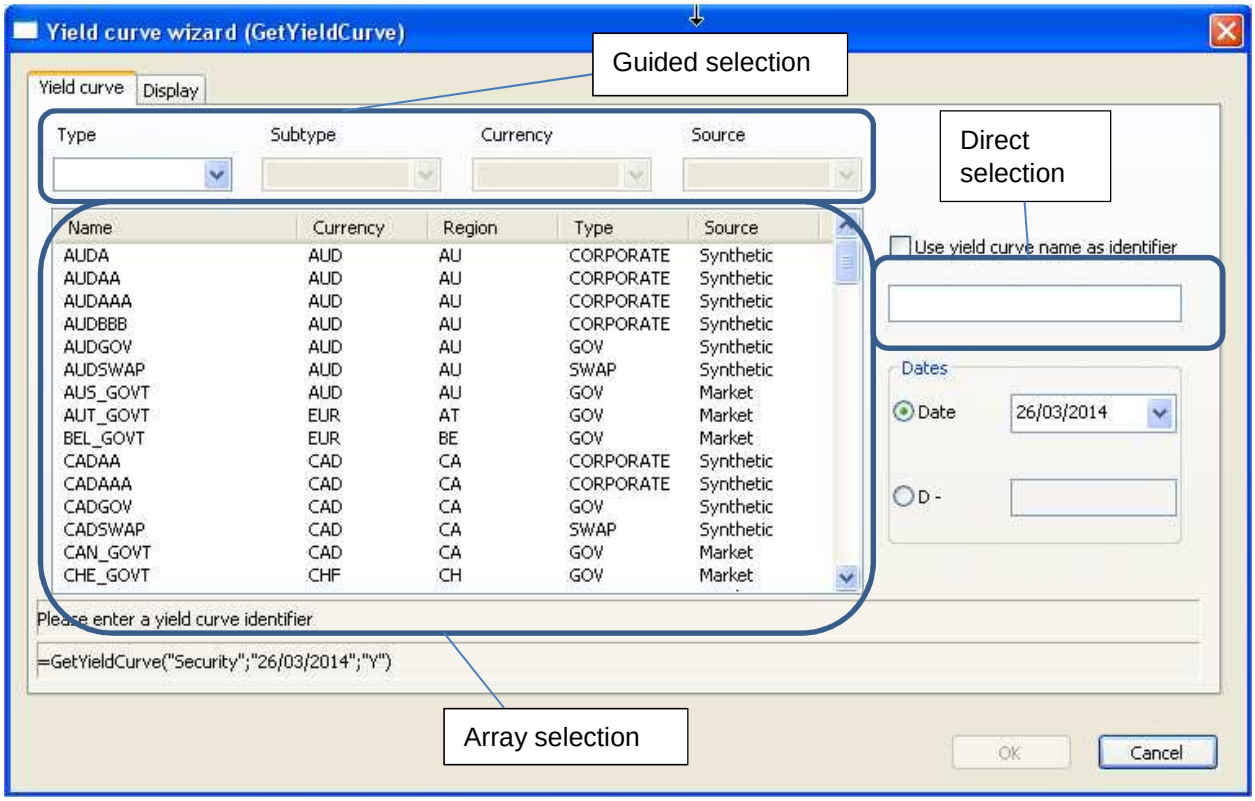
The GetYieldCurve Wizard offers assistance to users in creating GetYieldCurve functions.

The first tab is used to select the main arguments (the yield curve and the date).
The second tab proposes the optional arguments

- **The Yield curve tab**

The mandatory arguments are chosen in this tab:

- Yield curve
- Date



Selection of the Yield Curve

The checkbox “Use yield curve name as identifier” allows switching from descriptive syntax (default) to the name syntax.

The identifier can be selected:

- By entering the identifier in the “Direct selection” edit area.
- By clicking an item within the “Array selection” area.
- By using the “Guided selection” comboxes to filter the curves by type then by subtype and by currency and by source.

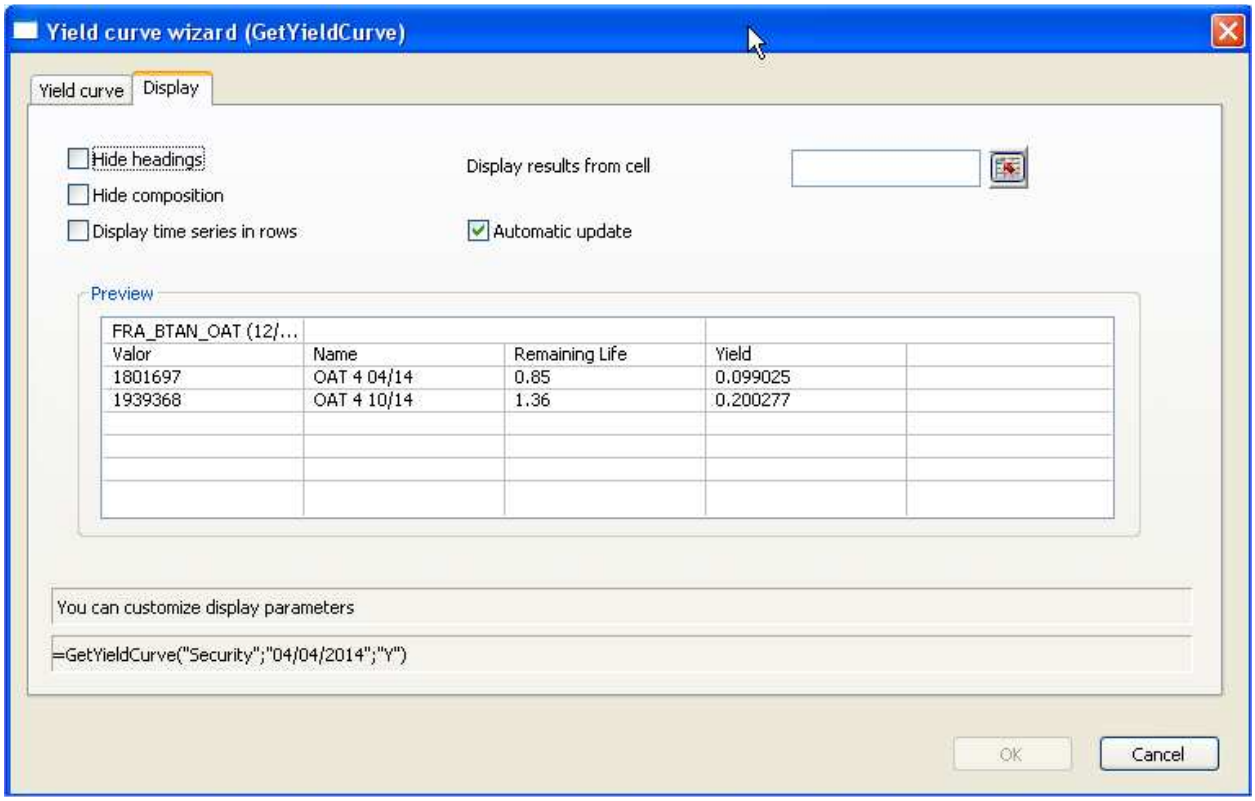
Selection of the date

Two radio buttons allows switching between fixed and rolling dates.

- **The Display tab**

The second tab defines optional parameters controlling the display of the headings, the composition of the yield curve and the inversion of rows and columns.

It also allows setting the automatic update argument and the offset cell (see 3.2 Display results from a chosen cell)


Yield curve wizard (GetYieldCurve)
Yield curve
Display
Hide headings
Hide composition
Display time series in rows
Display results from cell
Automatic update
Preview
FRA_BTAN_OAT (12/...
Valor
Name
Remaining Life
Yield
1801697
OAT 4 04/14
0.85
0.099025
1939368
OAT 4 10/14
1.36
0.200277
You can customize display parameters
=GetYieldCurve("Security";"04/04/2014";"Y")
OK
Cancel

4. Additional tools

4.1. GetToday and GetTime functions:

"GetToday" function allows you to automatically insert the current date into the current cell. Use this FinXL function instead of Excel function Today () for your date parameter definition.

"GetTime" function allows you to automatically insert the current date and time into the current cell. Use this FinXL function instead of Excel function Now () for your date and time parameter definition.

N.B.: These buttons insert formulas (into the current cell) which are recalculated only when using FinXL refresh functions: GetToday and GetTime are non-volatile equivalents to Today () and Now () Excel functions.
Use these functions instead of Excel's corresponding ones anytime you need to insert the current date or time into a FinXL function, otherwise Excel will wastes a lot of CPU time refreshing date and time.

4.2. The Refresh Tools

The "Freeze Workbook" button works like a toggle button, which allows you to freeze / unfreeze the updates of real-time data.

When you click the "Freeze Workbook" button, it is highlighted to indicate that data updates are not any more pushed to GetQuote functions.

If you click the button again, it reverts to the normal appearance. Data updates are pushed to FinXL functions (in real time or in cycled mode, depending on your settings).

Please note:

- Freezing/unfreezing process applies to your whole workbook
- Freezing/unfreezing process has no effect on historical functions (GetHisto, GetSnap) and calculation function (CalcBond).
- When in freeze mode, you can update all or some of the real time links by using the refresh buttons (snapshot)

The “Refresh Workbook” button allows you to refresh **all quotes data** (GetQuote, GetSnap, GetHisto) **and calculated data** (CalcRate, CalcBond, SimulBond) available in your whole workbook.

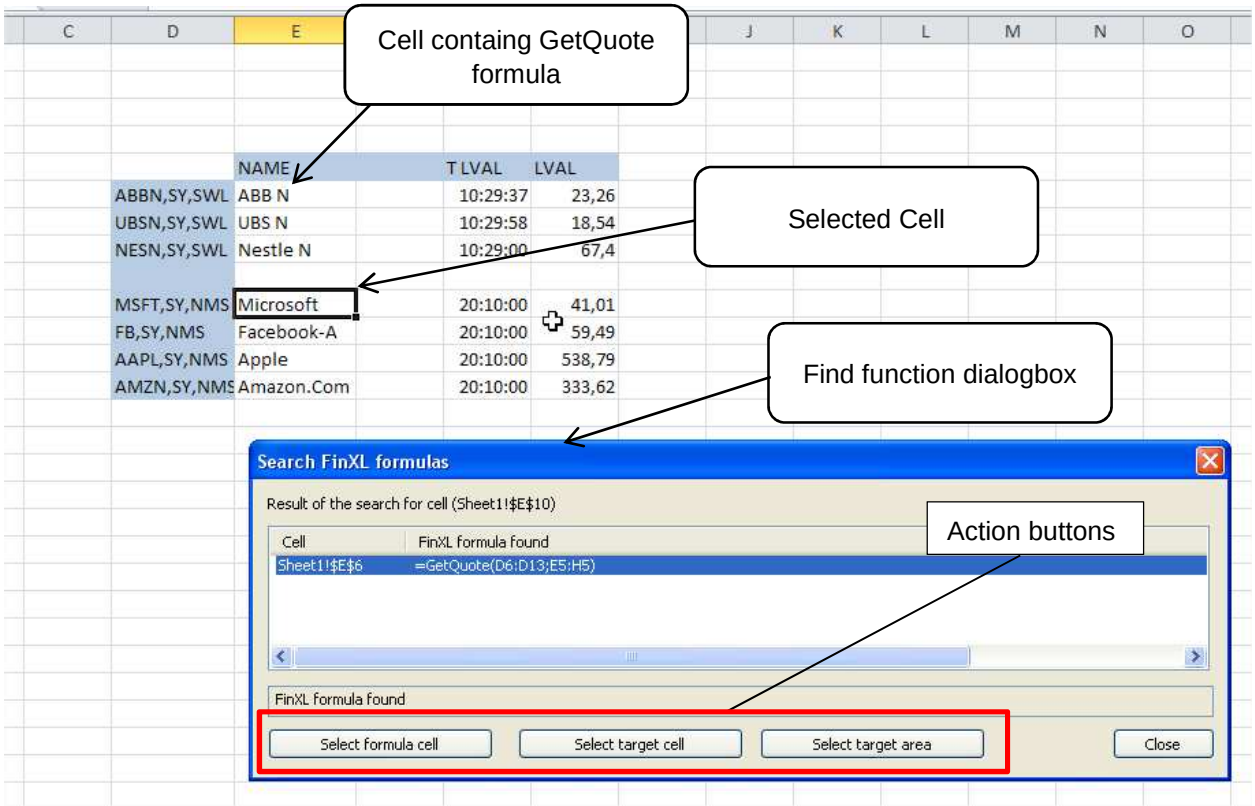
The “Refresh selected functions” button allows you to **select cells containing FinXL functions** in your active Excel sheet for which quotes/calculated data will be updated once (and only once) when you press this button.

For more information about the update rules of FinXL, see section 2.3.

4.3. Find function tool

The FindFunction Wizard offers assistance to users when auditing their FinXL functions within a workbook.

Please note that Excel formula audit tools do not recognize FinXL target cells.
If two functions display their result in the same cell, this tool can detect this kind of error.
Find function applies to a single selected cell.



Three action buttons can be used:

- **Select formula cell**: this buttons selects the cell that contains the formula.
  You should use this feature if you want to refresh the formula.
- **Select target cell**: selects the target cell if this parameter is defined. If no target cell is defined, selects the formula cell (implicit target cell)
- **Select target area**: select the entire range of cells of the result display, including headings and data.

4.4. Connection tools

Clicking on “Disable FinXL” button, you can "deactivate" Telekurs FinXL or "reactivate" all functions easily

The “Toolbar Reconnection” button allows hot reconnection: Reopening the workbook is not anymore necessary to refresh FinXL links and the toolbar is automatically restarted.

4.5. DDE Conversion tools

For users with Telekurs iD DDE files, a converting tool is available within the Telekurs FinXL menu. This tool replaces every DDE link by a "one security / one field" GetQuote function even if they are part of a more complex formula or function.

This operation has to be done manually by the user and it applies on the whole workbook.
A report will be displayed, detailing the results of the conversion.

N.B.1: This conversion does not apply to users' VB macros.

N.B.2: For optimal Telekurs FinXL performance, we strongly recommend using table functions instead of stand-alone syntax.

N.B.3: We strongly recommend saving your DDE workbooks before using the conversion tool.

Do not hesitate to contact your product advisor or SIX Financial Information helpdesk if you require assistance.

4.6. ConvertFields tool

The “Convertfields” tool allows you to change the language of all fields already in place in the workbook.

N.B.: the return function converts all fields in English.

5. Options / User preferences

Dialog box setting default identification parameters and other Telekurs FinXL options.

It allows you to choose your favorite language for the interface and data. Securities may be simultaneously labelled in their home language and the user's favorite one (i.e. Chinese/English).

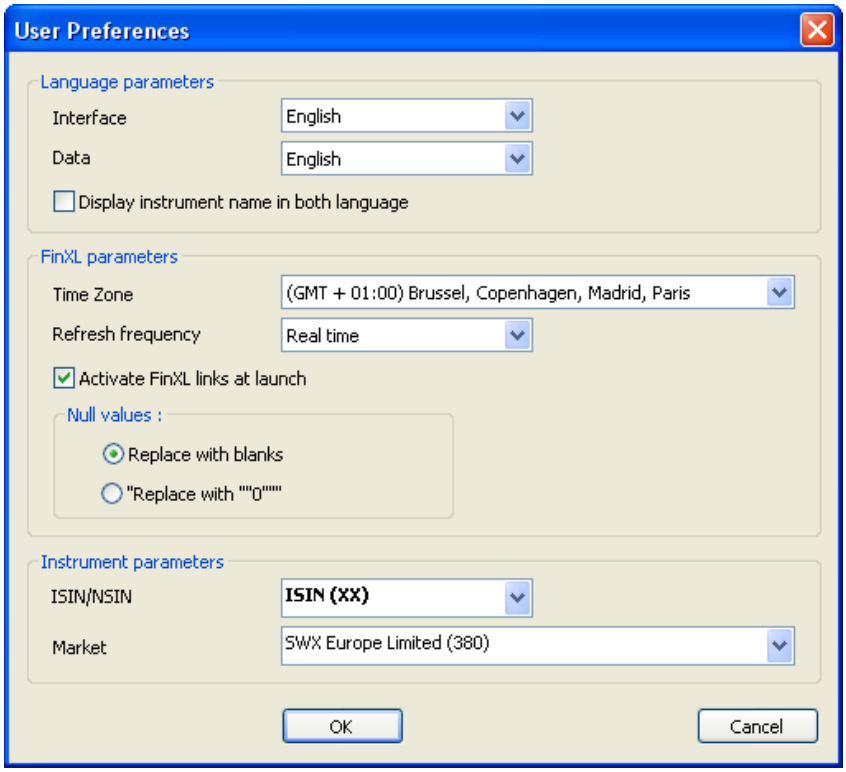
You can also set your time zone (market time, your local time or other time zone) and the refresh frequency (if real time is not necessary, you can improve Excel’s performance by choosing a filter).

A separate check box determines if real time data functions are to be activated on opening the file that contains them.

Other options include the choice of character – "blank" or zero – Telekurs FinXL will use if a field returns nothing (typically, last price for an unopened security.

The screen also offers the choice of a favorite numbering agency and a market.
Regarding the favorite agency, Telekurs FinXL will apply this choice by inserting identifiers in the sheet from a wizard.

Regarding the favorite market, Telekurs FinXL will apply this choice by filling in the gaps in incomplete security's identifiers as "**code**"



6. Entitlements and instruments limits

Each major Telekurs FinXL function (GetQuote, GetSnap, GetHisto, CalcRate and CalcBond) availability depends on your Telekurs iD package defined in the user's entitlements.

Limits on data requests are also included in the entitlements of every package. Exact limit values depend on your product package.

- GetQuote: a maximum number of securities, getting real time quotes at the same time, is set. When reached, a message will be displayed: "maximum instruments number reached". Please erase some lines in order to get below this limit.
- GetHisto: the number of securities you can use per working day is limited. When the limit is reached, a message is displayed: "maximum instruments number reached". You will have to wait until next day to get historical data on other securities.
- GetSnap: as for GetHisto, there is a limit to the number of securities you can request per day. The number of distinct dates you can request for a given security is also limited. When reached, a message will be displayed: "maximum instruments number reached" or “quota of distinct dates exceeded”. You have to wait until the following day in order to access new securities or new dates.

N.B.1: Please note that activating the automatic refresh for GetSnap may imply reaching these limits too fast. For this reason, the "automatic refresh" parameter is set to "N" by default.

N.B.2: Whenever you need to check your entitlements, you can use a monitoring tool that is available in the Telekurs FinXL connexion toolbar. Right click on the bar then click on "Entitlements" to reach the following window: